



CONSTRUCTION OWNERS ASSOCIATION OF ALBERTA

Best Practice for Field Level Risk Assessment

Overview

Introduction:

A vital link in any effective safety program is a process that encourages all workers to identify, assess and control risks that have the potential to cause loss to people, property, materials or the environment.

Purpose:

The Construction Owners Association of Alberta (COAA) promotes construction excellence to improve the safety performance in the construction industry. This Field Level Risk Assessment Best Practice offers *sample* methods which can be used to strive for excellence. COAA offers the *sample* methods, tools and training to the construction industry, and encourages their use in order to promote safety work sites for all Alberta workers.

Program Objectives and Expectations:

In providing this Field Level Risk Assessment Best Practice, COAA has the following Objectives and Expectations:

1. This Field Level Risk Assessment Best Practice provides *sample* tools and methods for:
 - identification of work tasks being performed
 - identification of 'day-of-the-job' hazards associated with work tasks
 - assessing the risks
 - controlling the hazards to an acceptable level of risk
1. COAA provides these sample tools and methods with the expectation that companies will tailor them to suit their company's needs, language, culture, etc.
2. COAA suggests that documentation of the "day-of-the-job" risk assessments be completed by supervisory staff in consultation and cooperation with the crew carrying out the work.
3. COAA suggests documentation be monitored regularly to determine trends, which may indicate, need for change to the safety program, safe work procedure, job project plans, etc.



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Best Practice for Field Level Risk Assessment

4. Supervisory staff will be provided with the tools (including training) to instruct and promote the use of the Field Level Risk Assessment Best Practice, and document the hazards and control methods identified.
5. All workers will be provided with tools to use of the Field Level Risk Assessment Best Practice at an individual level.
6. All workers will be trained, empowered and encouraged to utilize these tools in conducting all work.
7. Use of the Field Level Risk Assessment Best Practice will become a habit, and there will be an expectation that Field Level Risk Assessment be performed on worksites throughout Alberta.

*FIELD LEVEL
RISK
ASSESSMENT*

**MANAGER'S
HANDBOOK**

Written by Esther Hudson (Capability Connections) and Deborah Smith (DSA) for
Construction Owners Association of Alberta, 1998

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consent of the authors or the Construction Owners Association of Alberta.

SOME QUESTIONS FOR YOU

1. Do you know that the construction industry has the highest rate of injury accidents of all the industries in Alberta?
2. Have you ever computed the **real cost** of accidents/incidents e.g. equipment /environmental damage, lost work time, WCB premiums, poor reliability resulting in bad public relations, low morale? In one Alberta company the direct costs alone for a 15 month period were estimated to be :

Critical incidents:	2 = \$1,000,000
Major incidents	57 = \$7,647,735
Serious incidents	79 = \$1,642,200
Incidents	223= \$386,800

TOTAL	\$11,581,535
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3. Does the cost that you experience from incidents significantly affect your profits and your rating with your customers?
4. Do you think that these incidents could be avoided if your workers would stop and think before they did work?

After using a process that included field level risk assessment, this Alberta company experienced a 300% increase in reported incidents and a **40% decrease in serious injuries.**

5. Do you wish you had a new way to work with crews in your company to improve your accident figures?

READ ON AND FIND OUT MORE ABOUT FIELD LEVEL RISK ASSESSMENT

INTRODUCTION

This handbook has the following sections:

1. Making the Decision to Use Field Level Risk Assessment.

Read this to **decide** if you are interested in using Field Level Risk Assessment in your company.

- What is Field Level Risk Assessment 4
- Benefits of Field Level Risk Assessment 5
- Your Decision 6

2. Managing Field Level Risk Assessment

Read this to **learn more** about the process of Field Level Risk Assessment.

- The Model and Tools 7
- How To Start Using Field Level Risk Assessment 11
- How To Manage the Ongoing Use of Field Level Risk Assessment 16

3. Overview of Field Level Risk Assessment Tools and Training

Read this section to find out what **tools and training** are available to use in your company. A sample plan to use in your company is included.

- Overview of Tools and Training 19
- Making Your Plan: A Tool 22
- Templates 27

Section 1:

MAKING THE DECISION TO USE FIELD LEVEL RISK ASSESSMENT

WHAT IS FIELD LEVEL RISK ASSESSMENT?

It is a method that individuals and crews use to eliminate or minimize potential losses (to people, property, materials or environment) during the course of doing work.

Field Level Risk Assessment is a way for workers and crews to:

- Identify hazards associated with work tasks and assess their risks on the **day of the job**.
- Put controls in place so that risks are kept to an acceptable level.

Field Level Risk Assessment is a way for companies to:

- Learn how to **decrease risk** and **increase the reliability** of work .
- Reduce the number and associated costs of incidents, accidents and injury.

Field Level Risk Assessment has:

- Tools that help workers stop, think and put controls in place.
- Training for supervisors and workers.
- Sample forms that can be used to document field level risk assessments and make improvements.
- A manager's handbook.

BENEFITS OF FIELD LEVEL RISK ASSESSMENT

FOR COMPANIES

- Improved work methods and productivity
- Direct cost savings
- WCB premium reduction
- Decreased costs to pass on to customers. A competitive edge.
- Better data to improve company safety
- Reduction in the “emotional” costs of accidents and injuries
- Increased trust and confidence of workers
- Due diligence

FOR WORKERS

- Reduced probability of injuries
- More security for their families
- Improved morale
- Opportunity to make work place improvements
- Opportunity for recognition of increased contribution to the company
- Improved ability to think critically

YOUR DECISION

USING FIELD LEVEL RISK ASSESSMENT

Making this system work in your company will take effort. You will need to:

1. Learn to do field level risk assessment.
2. Develop a plan for using it in your company.
3. Change existing company systems to support this new way of doing work e.g. record keeping, safety policies, reward systems, etc.
4. Get people on board. This is not just the “fad of the month”.
5. Make sure people are trained to use the system.
6. Monitor whether people are using the field level risk assessment process.
7. Deal with the “slow down to speed up” problems that may occur at first.
8. Use the information that is generated in the written reports to improve the way work is done.

QUESTIONS TO ASK YOURSELF BEFORE YOU DECIDE	Yes	No	Not Sure
1. Are you concerned about losses that your company has because of incidents?			
2. Do you think that workers can make a difference to your company's profit and loss?			
3. Are you prepared to do the work to get started? e.g. Plan, train, motivate, etc?			
4. Are you prepared to make changes to support using this process in your company? e.g. developing record keeping methods, giving recognition ?			
5. Are you prepared to keep the focus on this process until people establish the habit?			

**Read on and find how to implement and manage
Field Level Risk Assessment in your company.**

Section 2:

MANAGING FIELD LEVEL RISK ASSESSMENT

THE MODEL AND TOOLS

THE MODEL

What is Field Level Risk Assessment?

- It is a **mental process** used by both individual supervisors and workers.
- It is a problem solving process that uses **discussion on the job site**.
- It includes **writing** down the outcomes of the discussion. This part is optional but strongly recommended.

How is Field Level Risk Assessment done?

Supervisor and crew **discuss the work** to be done on the day of the job. Together they:

- Identify the job steps.
- Identify the hazards associated with each step.
- Assess the level of risk for each hazard.
- Identify and put in place the controls to effectively control the risk

The Supervisor:

- **Prepares and leads** Field Level Risk Assessment discussions
- **Documents** this information on a form prepared for this purpose.
- **Submits** the documentation for analysis and review.
- Makes completed **form available** to crew.

Each worker:

- **Stops and thinks** about hazards, risks and controls while working.

Specifically assigned personnel:

- **Review the field level risk assessment data** to identify ways to reduce hazards and risk on an ongoing basis.

Where is Field Level Risk Assessment done?

At the job site

When is Field Level Risk Assessment done?

- At the **beginning** of a new job or new shift
- When **new workers** come on site
- When the information about the **work changes** (e.g. changed plans, unexpected characteristics of the task such as new configuration of equipment)
- Whenever job site **conditions** change (e.g. weather, availability of tools etc.)

Who does Field Level Risk Assessment?

- The **supervisor** thinks through the process to prepare for meeting with the crew.
- The supervisor leads a discussion with **the crew** encouraging their analysis and feedback.
- The **worker** does it as a mental process as he/she works.

Why Do Field Level Risk Assessment?

To fulfill the employer requirements of the **Occupational Health and Safety Act:**

- Employers are required “to ensure as far as it is reasonably practicable” the health and safety of workers present at the work site.
- Workers are required to protect the health and safety of themselves and others.
- Employers are required to make sure workers are aware of their health and safety responsibilities.

To **reduce losses** due to uncontrolled hazards. Field Level Risk Assessment:

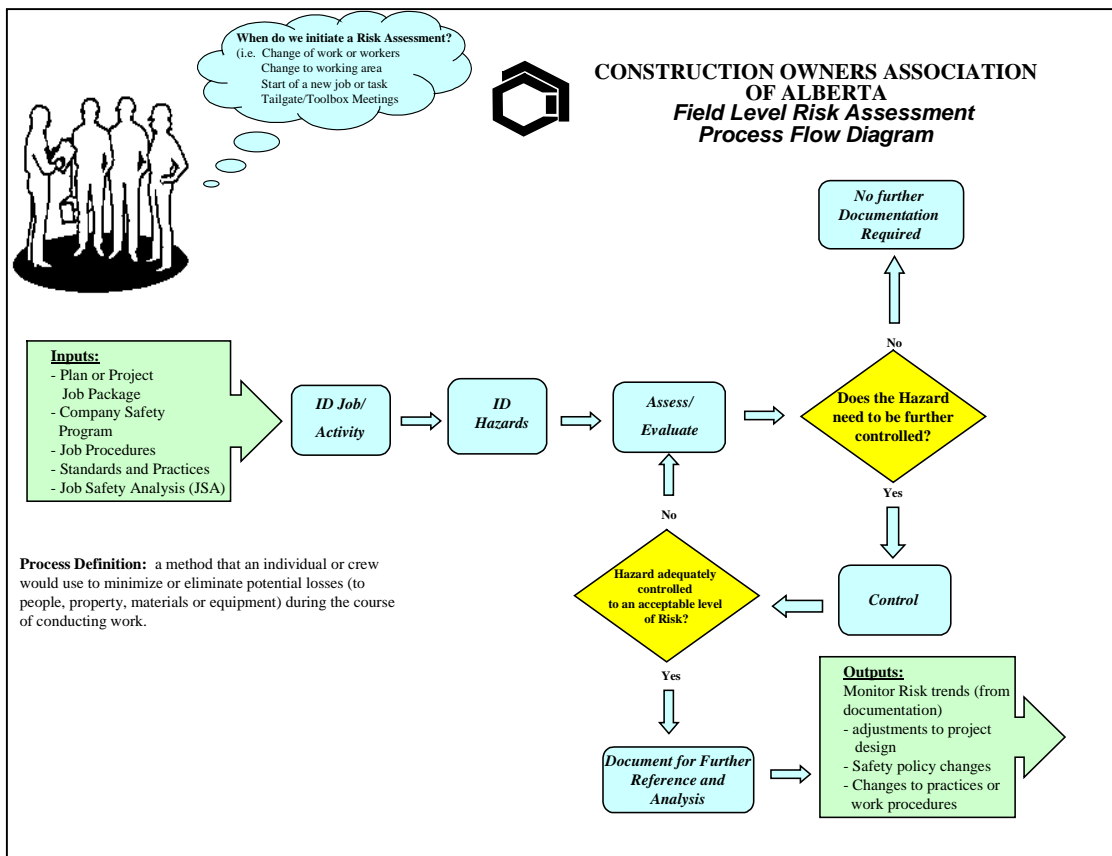
- Facilitates a safer working environment for people.
- Helps to minimize or eliminates losses to property, materials and the environment.

FIELD LEVEL RISK ASSESSMENT PROCESS

This flowchart shows the process used to conduct the Field Level Risk Assessment and put controls in place. It also shows how Field Level Risk Assessment is integrated into other company safety initiatives.

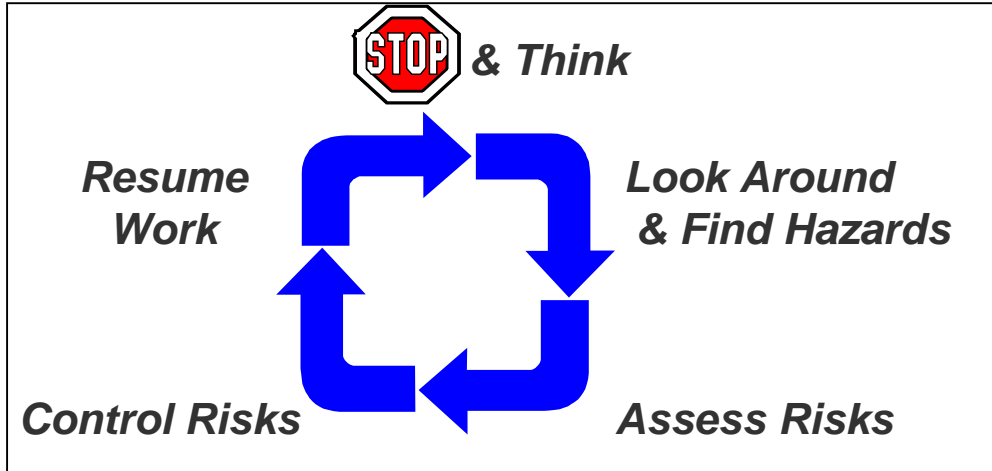
Note that Field Level Risk Assessment does not replace other planning and risk assessment processes. Methods such as Hazop and Job Safety Analysis are used before construction begins. Field Level Risk Assessment incorporates the information from these processes and adds **day of the job** information.

The Construction Owners Association of Alberta has developed a form that can be used or adapted for record keeping. Although writing down the results of the team discussion may not appear to improve the risk assessment, it is highly recommended. Writing things down encourages better thinking. The information obtained from the team discussions can be used to **improve work procedures** and will improve safety in the long run.



THE “MEMORY JOGGER” – A CARD FOR WORKERS

The “Memory Jogger” is a pocket-sized card to give to workers as a reminder of how to conduct Field Level Risk Assessment. Your company can customize this card. Templates are found in Section 3.



FIELD LEVEL RISK ASSESSMENT

Questions to ask before & while doing a task:

IDENTIFY:

- ✓ Do I clearly understand my task?
- ✓ Am I physically & mentally prepared to do the task?
- ✓ What could go wrong?
- ✓ Is there a risk to others or myself?
- ✓ What can change that could create a new risk?
- ✓ Could other crews, workers, or conditions pose risks to me?

ASSESS:

- ✓ How bad could this be?
- ✓ How likely is it to happen?

CONTROL:

- ✓ Who should I contact for help?
- ✓ Are permits, written practices, procedures, etc. required?
- ✓ What can I do to control the risk?
- ✓ Will the control affect another part of the task being done?
- ✓ Do I need to tell anyone else?
- ✓ Are emergency response plans required?

**“IF IN DOUBT SHOUT”
CONTACT YOUR SUPERVISOR!**

HOW TO START USING FIELD LEVEL RISK ASSESSMENT

CHALLENGES WORKERS MAY HAVE

1. Field Level Risk Assessment requires workers to **stop** and **think before doing** even routine tasks. It is easier just to work as usual. Changing any habit is hard. Thinking before doing will get easier with practice and reinforcement.
2. Field Level Risk Assessment requires **critical thinking skills** that may be underdeveloped in some workers. As workers develop these thinking skills, they will improve their performance in many other situations.
3. Field Level Risk Assessment requires individuals to **accept responsibility** for thinking and taking action. Many people expect to be told what to do but they like to give ideas. With input comes a greater commitment to good work.
4. Doing Field Level Risk Assessment may mean **challenging authority** for some people. Supervisors may expect to do the thinking and the telling. They may be uncomfortable having workers tell them that something at the work site needs to be done differently. Workers may be uncomfortable playing that role. Using this process builds teams.
5. Using the forms requires **more paperwork** that most foremen do not enjoy. The process of writing assessments requires crews to think through conditions more carefully. It also means that their ideas and suggestions are recorded and used by the company to improve safety.

NOTE: Using the ideas “How to Get People on Board” will help to overcome many of these problems.

HOW TO GET PEOPLE ON BOARD

Implementing Field Level Risk Assessment represents a change for your company. Understanding what people need to **motivate** them to change is helpful. You can then address their needs in your plan.

What People NEED To Start Using FIELD LEVEL RISK ASSESSMENT	What YOU CAN DO To Get People on Board
<p>People need to understand that there is a serious problem and that doing Field Level Risk Assessment is the best solution for:</p> <ul style="list-style-type: none"> • the company • themselves 	<p>Give information that describes the problem. Gather information that answers these questions:</p> <ul style="list-style-type: none"> • How much do accidents cost? • How do these costs affect our competitive position in the market place? • How will reduced costs affect company contracts and keep workers employed? • How will Field Level Risk Assessment reduce their personal risk? <p>Give information about the results you are shooting for:</p> <ul style="list-style-type: none"> • What are your objectives regarding incidents, accidents and injury? • What will you do to make Field Level Risk Assessment an ongoing way of doing work?
<p>People need to be involved in getting Field Level Risk Assessment going.</p>	<p>Ask the “leaders” in your company to help plan and install Field Level Risk Assessment.</p> <ul style="list-style-type: none"> • Choose both supervisors and workers • Choose some “hard nuts” who have influence

<p>What People NEED To Start Using FIELD LEVEL RISK ASSESSMENT</p>	<p>What YOU CAN DO To Get People on Board</p>
<p>People need to know that progress toward the objectives of reduced incidents, accidents and injury will be measured.</p>	<p>Choose the measures and tell people.</p> <ul style="list-style-type: none"> • Use numbers. e.g. How many forms? What is the reduction in accidents? • Track quality e.g. How well are forms filled out? What is the reduction in accidents of the same type? • Use ad hoc measures e.g. conversations on the work site asking, “How it is going?” • Set up regular ways to report results e.g. newsletters, bulletin boards, meetings.
<p>People will use Field Level Risk Assessment, if consequences are clear and used.</p>	<p>Put rewards/ recognition in place.</p> <ul style="list-style-type: none"> • Focus on the positive. • Choose rewards that fit with your company’s best way of doing things. • Use persistent feedback as consequence for not using Field Level Risk Assessment i.e. I will check to make sure that you are doing it etc. • Deal with fears positively (e.g. fears of speaking out).
<p>People need to be well trained and have the skills to use Field Level Risk Assessment.</p>	<p>Train both workers and supervisors</p> <ul style="list-style-type: none"> • Use the training packages provided by COAA. (customize as you like) • Use every opportunity to coach and reinforce the skills and behaviors. • Make sure that supervisors constantly train their crews.

<p>What People NEED To Start Using FIELD LEVEL RISK ASSESSMENT</p>	<p>What YOU CAN DO To Get People on Board</p>
<p>People need to get feedback on their use of Field Level Risk Assessment.</p>	<p>Use many opportunities to give feedback to individuals and crews</p> <ul style="list-style-type: none"> • Use safety meetings. • Attend tailgate sessions. • Use performance discussions if you have regular ones. • Use management meetings. • Use written and verbal methods.
<p>People need to have personal success or see others have success using Field Level Risk Assessment.</p>	<p>Produce “ quick wins” and positive changes.</p> <ul style="list-style-type: none"> • Find early successes and announce them. • Ask for examples of successes at safety and other meetings and gatherings.
<p>People need to see that management is serious about Field Level Risk Assessment</p>	<ul style="list-style-type: none"> • Use the employees’ suggestions to improve tools and procedures. • Invest in “controls” that make an ongoing difference. • Use the process yourself.

<p>What People NEED To Start to Use FIELD LEVEL RISK ASSESSMENT</p>	<p>What YOU CAN DO To Get People on Board</p>
<p>People need to see that company systems, goals and measures reinforce not compete with doing Field Level Risk Assessments.</p>	<p>Coordinate other systems and measures</p> <ul style="list-style-type: none"> • Make risk assessment a primary goal, higher than getting the work done fast. • Reward and recognize individuals and crews who do risk assessment (promotions, added responsibility, visibility, prizes, cash, etc.). • Write policies and procedures about Field Level Risk Assessment. • Stream-line related paper-work to make sure it doesn't interfere with Field Level Risk Assessment. • Set up a way to use the information from the Field Level Risk Assessment forms. • Change the job descriptions of everyone who is involved in doing field level risk assessment. This includes administrative people and those analyze the information from the forms.

HOW TO MANAGE THE ONGOING USE OF FIELD OF LEVEL RISK ASSESSMENT

MONITORING THE USE OF FIELD LEVEL RISK ASSESSMENT

1. Use standards and indicators

The questions “What do you want people to do?” and “How do you want them to do it?” are important management questions. Documented standards make these expectations clear for workers. There should be standards about Field Level Risk Assessment for both crews and individuals. Indicators describe how and when you will measure the performance in relation to the standards. **Here are some examples:**

- At the beginning of every job, every shift, and **every time there is a change** in job plans or conditions, the crew will meet together and do a Field Level Risk Assessment.

Possible Indicators: You see crew meetings taking place.

- Every time a worker changes a task they do a **mental Field Level Risk Assessment**.

Possible Indicators: You see workers putting controls in place, reporting concerns to foremen, stopping to think before starting a new job step.

- Every time there is a crew discussion a Field Level Risk Assessment **form is filled in**.

Possible Indicators: A minimum of one form is submitted for each day of crew activity.

- At the end of each month, the Field Level Risk Assessment **forms will be reviewed** at a joint work site committee.

Possible Indicator: Person assigned to this task submits a summary of hazards identified and suggestions for changes to improve how work is done.

2. Make monitoring a standard process

Decide how you will monitor, who will monitor, and when you will monitor. **Here are some examples:**

- **What you will do:** Verbal reports at management and safety meetings, reports during performance discussions, spot checks at the work site, spot checks of documentation, audits, etc.
- **Who:** Senior management, foremen, supervisors, health and safety staff.
- **When:** Consistent and persistent time frames set for each activity.

3. Keep records

Decide what you will record to check your progress toward your objectives, who will do the recording and how it will be recorded. **Here are some examples:**

- **What:** Field Level Risk Assessment Forms, monthly reports of suggestions, spot check results of crews and individuals
- **Who:** Management, foremen
- **How:** In personnel files, in data bases, hard files

4. Develop a way to give feedback

Communicate individual and company progress and performance in relation to targets and expectations.

- **Methods:** newsletters, memos, announcements, one on one conversations, meetings

USING FIELD LEVEL RISK ASSESSMENT TO IMPROVE BUSINESS RESULTS

There are three ways that using Field Level Risk Assessment can improve your business results. They are:

1. COST REDUCTION: Reduction in the number and severity of incidents, accidents and injury

Consistent and effective use of Field Level Risk Assessment will reduce the number of incidents, accidents and injuries in your company. This change will **reduce your costs**. Consistent expectations, training, monitoring, feedback and rewards will establish Field Level Risk Assessment as a habitual practice for individuals and crews.

2. IMPROVEMENT IN PROFITS: Improvement in the way work is done

Incidents happen when effective measures are not put in place to control hazards. They are a symptom of a way of working that is not reliable. Using written procedures, better tools or equipment, or standards to govern working conditions can eliminate or reduce the severity of the risks. These changes also improve reliability. Improving reliability increases the quality and often the quantity of work that is done. Individual and crew productivity improve.

By reviewing Field Level Risk Assessment forms, you can identify trends and patterns of hazards. An analysis of these trends and patterns may uncover ways to improve work methods. To achieve this result, it is crucial that you assign specific people to gather and analyze Field Level Risk Assessment data, solve the identified problems, and take action on making changes. Improvements will not happen without effort and good management.

3. IMPROVEMENT IN COMPANY MORALE: Improved worker commitment

Opportunity for growth and achievement, clear expectations and personal responsibility, the ability to influence, and working as a team are factors which influence employee motivation and commitment. Field Level Risk Assessment provides workers with these opportunities. Workers develop critical thinking skills, make meaningful contribution to the company's success, and participate in important team problem solving. Increasing health and safety for themselves and others is perhaps the most important and motivating outcome of doing Field Level Risk Assessment.

Although the impact of morale is not as easily measured as cost and profit, most managers agree there is correlation between high morale, productivity and quality of work. Field Level Risk Assessment has the potential to improve the attitudes people develop about work and the company.

Section #3:

OVERVIEW OF TOOLS AND TRAINING

TOOLS

Copies of these tools are found at the end of this document.

MEMORY JOGGER CARD

This is a pocket-sized card for each worker. Your company can customize it.

RISK ASSESSMENT MATRIX

This is a simple matrix that helps to assess the risk associated with a hazard. The variables used to assess risk are the possible consequences associated with the hazard and the probability that it will occur.

FIELD LEVEL RISK ASSESSMENT PROCESS FLOWCHART

This is a flowchart that explains how the Field Level Risk Assessment process fits with other company loss management processes.. It is useful as a pictorial overview of inputs, process steps and outputs of the process.

FIELD LEVEL RISK ASSESSMENT FORM

This is a form to record Field Level Risk Assessment discussions conducted by crews. The forms can be produced in pads that fit clipboards. The forms can be designed to include a process chart, memory jogger card information and the risk assessment matrix. They can also be produced in duplicate to provide copies for record keeping and analysis purposes.

TRAINING/ INFORMATION

Training and/or information in Field Level Risk Assessment is available for managers, supervisors and workers.

MANAGERS

“The Manager’s Handbook”

This document is provided to meet the information needs of managers who are interested in understanding Field Level Risk Assessment. It does not develop skill in using the process, however. Manager may wish to use the “Supervisor’s Guide to Field Level Risk Assessment: Part One – Self Study Training” to develop skill in doing Field Level Risk Assessment.

SUPERVISORS

“Supervisor’s Guide to Field Level Risk Assessment: Part One – Self-Study Training”

The “Supervisor’s Self-Study Guide To Field Level Risk Assessment” is a self-study program designed to teach supervisors how to do Field Level Risk Assessment. It uses content and exercises from the training for workers but is to be done by self-study rather than in a group setting. It includes instruction in how to use the “Field Level Risk Assessment Form” and how to conduct a Field Level Risk Assessment discussion with a crew.

After completing this self study training in Field Level Risk Assessment supervisors will be able to:

1. Describe why Field Level Risk Assessment is needed to improve worker health and safety, work effectiveness and company profitability.
2. Describe how Field Level Risk Assessment helps employers and workers fulfill the requirements of Occupational Health and Safety Legislation.
3. Describe what Field Level Risk Assessment is, when it is done, and who does it.
4. Describe the process steps for Field Level Risk Assessment.
5. Identify the steps of a job and identify the hazards linked to each job step.
6. Assess the risks linked to the hazards identified in a job using the Risk Assessment Matrix.
7. Identify appropriate controls to put in place, to reduce risk to an acceptable level.
8. Use a form to record Field Level Risk Assessment discussions.
9. Make personal plans about using Field Level Risk Assessment to supervise workers more effectively.
10. List the benefits that the company and workers experience through using Field Level Risk Assessment.

“Supervisor Guide to Field Level Risk Assessment: Part Two Training Others”

This contains information a supervisor or trainer would need to deliver training sessions to workers. It includes detailed instructions for teaching the sessions, overhead masters, and ideas about how to make the training fit your company's needs.

The table of contents is:

1. Description of the Training
2. How to Prepare Yourself For Delivering the Training
3. Lesson Plans
4. Overhead Masters
5. How to Customize the Training
6. Tips on How to Deliver Training

WORKERS

“Field Level Risk Assessment” Workshop

This training workshop can be delivered in variety of two-hour formats. It uses discussion, practical examples and case studies. It is designed to teach skills and motivate workers.

The purpose of the training is:

To prepare work site personnel to use the Field Level Risk Assessment process, in a habitual way, to identify potential hazards, assess their magnitude, and decide if controls are needed.

As a result of the course, workers will be able to:

1. Identify and describe a hazard, an assessment of risk and a control.
2. Describe the process of Field Level Risk Assessment.
3. List the two components of Field Level Risk Assessment.
4. Identify situations where the Field Level Risk Assessment process should be used.
5. Use the “Memory Jogger” questions to do a Field Level Risk Assessment.
6. Use the Risk Assessment Matrix to assess the risk in a situation.
7. Demonstrate their ability to do Field Level Risk Assessment in a group using a case study.
8. Discuss the kinds of hazards that are possible on a work site.
9. Discuss the types of controls that can be used to keep risk to an acceptable level.
10. Discuss the barriers to using Field Level Risk Assessment habitually and the supports that are available to overcome these barriers.
11. Discuss the responsibilities they have to use Field Level Risk Assessment.
12. Describe how Field Level Risk Assessment will be used in this company.
13. List the benefits of making Field Level Risk Assessment a habit on every job.

MAKING YOUR PLAN: A TOOL

What follows is a **sample action plan** for making Field Level Risk Assessment happen in your company. It is a planning tool as well as a checklist to track completion. The “How” column includes suggested methods. These suggestions are in italics.

Action/Objective	Who	How? When?	Done? ✓
PHASE 1: Build Commitment			
Key decision-makers in company become familiar with Field Level Risk Assessment	Decision makers in company	<ul style="list-style-type: none"> <i>Read and discuss the COAA “Field Level Risk Assessment: Manager’s Handbook”</i> 	
Gather facts on the number and cost of incidents.	Safety or other personnel, general manager		
Set challenging targets for improvement in incident, accident and injury figures	Company management		
Assign individual /team to develop company plan	Company management		
The individual/team become familiar with problem, targets and Field Level Risk Assessment Process	Individual /team doing the plan	<ul style="list-style-type: none"> <i>Members of the management team complete the “Supervisor Guide to Field Level Risk Assessment: Part One Self-Study Training”</i> 	

Action/Objective	Who	How? When?	Done? ✓
PHASE 2: Get Ready			
Review company policies and procedures that will be affected by Field Level Risk Assessment.	Individual or team doing the plan		
Find out how positions in the company would be affected by doing Field Level Risk Assessment, i.e. workers, supervisors/ foremen, individuals who will process Field Level Risk Assessment information.	Individual or Team doing the plan	<ul style="list-style-type: none"> • <i>Ask management who they want to handle the documentation, the monitoring of worker and crew performance, recommendations that come from the process</i> 	
Find out the quality of performance in Field Level Risk Assessment that company management expects.	Individual or Team doing the plan	<ul style="list-style-type: none"> • <i>Ask management</i> • <i>Write a standard and get it approved</i> 	
Find out what rewards or consequences management wants to put in place for people doing or not doing Field Level Risk Assessment.	Individual or Team doing the plan	<ul style="list-style-type: none"> • <i>Ask management</i> • <i>Make a proposal and have it approved</i> 	
Find out how Field Level Risk Assessment will affect other safety programs in the company.	Individual or Team doing the plan		
Find out what resources (\$, people, time) are available for training workers and supervisors.	Individual or Team doing the plan	<ul style="list-style-type: none"> • <i>Do a rough budget of training and other costs and give to management</i> • <i>Ask management for preliminary approval</i> 	

Action/Objective	Who	How? When?	Done? ✓
PHASE 3: The Plan (who, when, how)			
Develop the communication for Field Level Risk Assessment. This includes getting it started and the ongoing communication that will be needed to keep it going.	Individual or Team doing the plan		
Decide how changes in company policies, procedures and related safety programs/initiatives (including audits) will be made.	Individual or Team doing the plan		
Determine how changes to roles/job descriptions will be made.	Individual or Team doing the plan		
Develop the plan for the training of workers and supervisors/foremen.	Individual or Team doing the plan		
Decide how documentation will be used to improve safety and work results.	Individual or Team doing the plan		
Identify how, where and by whom documentation will be stored.	Individual or Team doing the plan		
Develop a monitoring plan.	Individual or Team doing the plan		
Decide how COAA tools will be adapted for use in the company e.g. form, matrix	Individual or Team doing the plan		
Identify what could go wrong with the plan and make adjustments.	Individual or Team doing the plan		

Action/objective	Who	How? When?	Done? ✓
PHASE 4: Taking Action			
Communicate about the program	Management		
Change job responsibilities	Management		
Change policies	Management		
Set up new process to deal with documentation	Administration / Management		
Set up monitoring methods	Management		
Prepare and deliver training	Supervisors, trainers, or contractors		
Monitor "Take Action" activities and make adjustments	Management		
Monitor use of Field Level Risk Assessment	Management		
Communicate successes	Management		

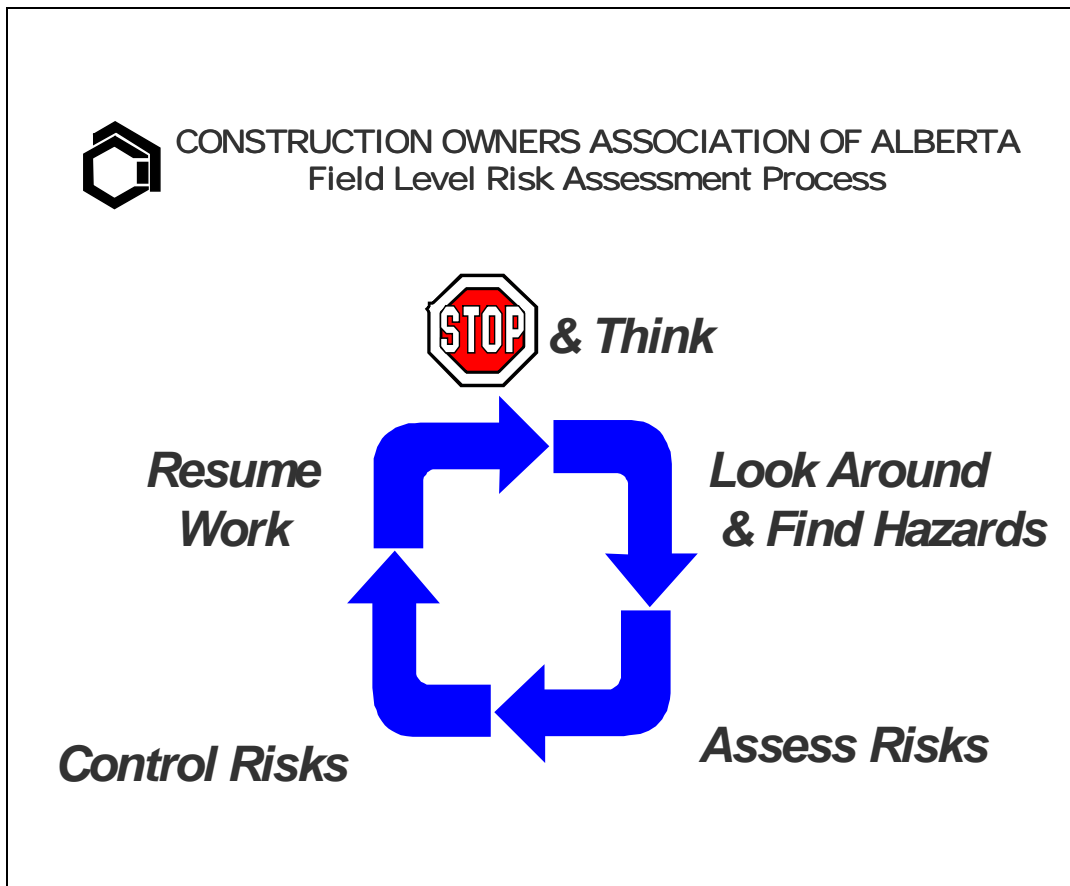
Action/objective	Who	How? When?	Done? ✓
PHASE 5: Review Program			
Review progress toward targets and objectives	Management	<ul style="list-style-type: none"> • <i>Gather information from audits and monitoring activities</i> 	
Identify changes required and develop plan	Management		
Implement plan	Management		

TEMPLATES

THE “MEMORY JOGGER” – A CARD FOR WORKERS

The “Memory Jogger” is a pocket-sized card to give as a reminder of how to conduct “Field Level Risk Assessment. Your company can customize this card.

(SIDE ONE)



“MEMORY JOGGER CARD” SIDE TWO



FIELD LEVEL RISK ASSESSMENT

Questions to ask before & while doing a task:

IDENTIFY:

- ✓ Do I clearly understand my task?
- ✓ Am I physically & mentally prepared to do the task?
- ✓ What could go wrong?
- ✓ Is there a risk to others or myself?
- ✓ What can change that could create a new risk?
- ✓ Could other crews, workers, or conditions pose risks to me?

ASSESS:

- ✓ How bad could this be?
- ✓ How likely is it to happen?

CONTROL:

- ✓ Who should I contact for help?
- ✓ Are permits, written practices, procedures, etc. required?
- ✓ What can I do to control the risk?
- ✓ Will the control affect another part of the task being done?
- ✓ Do I need to tell anyone else?
- ✓ Are emergency response plans required?

**“IF IN DOUBT SHOUT”
CONTACT YOUR SUPERVISOR!**

RISK ASSESSMENT MATRIX

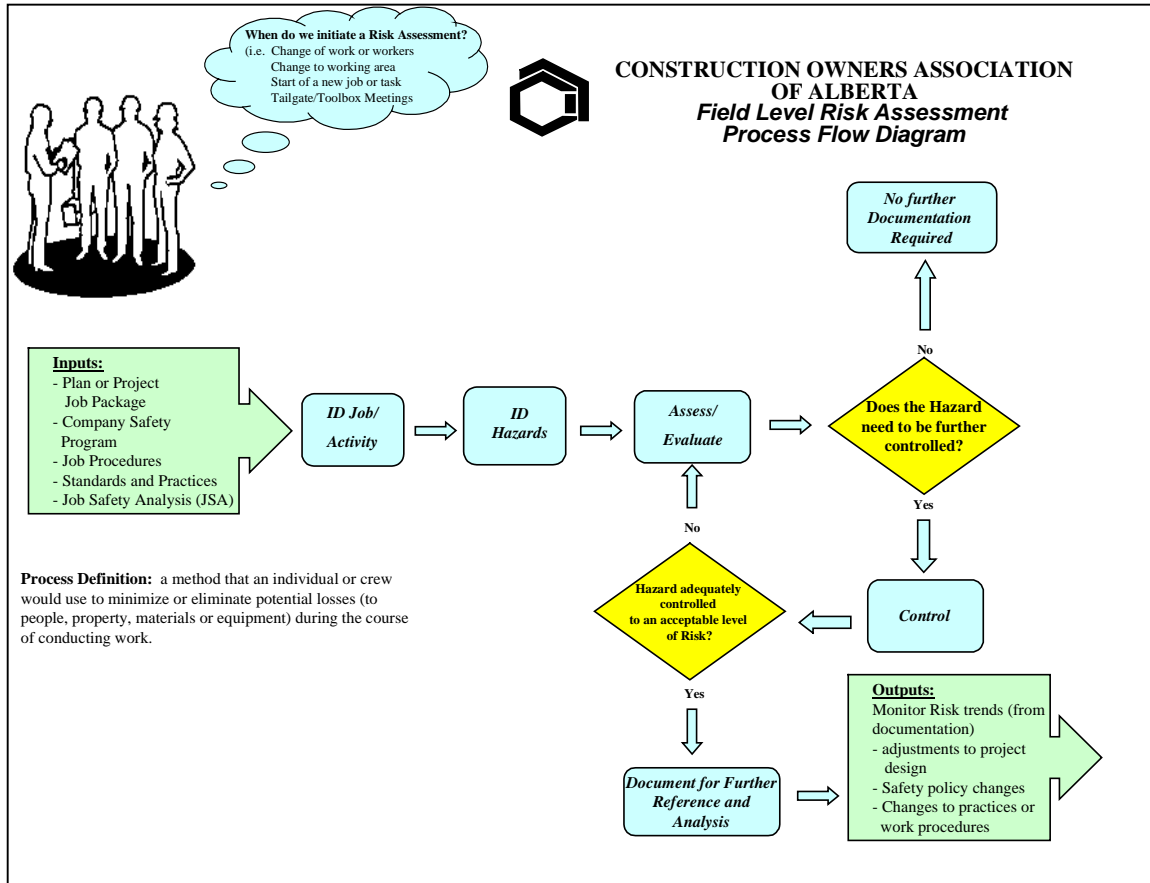
LEVEL OF RISK = Consequences X Probability

Consequences: High (H)– Serious; **Medium (M)** – Moderate; **Low (L)** – Minor

Probability: High (H)– Often; **Medium (M)**– Sometimes; **Low (L)** – Rarely

		PROBABILITY		
		High	Med.	Low
CONSEQUENCES	High	H	H	M
	Med.	H	M	L
	Low	M	L	L

FIELD LEVEL RISK ASSESSMENT PROCESS FLOWCHART



FIELD LEVEL RISK ASSESSMENT FORM

FIELD LEVEL RISK ASSESSMENT			
DATE: _____		PROJECT NAME: _____	
LOCATION: _____		COMPANY: _____	
STEP 1 – IDENTIFY MAIN JOB TASKS	STEP 2 – IDENTIFY HAZARDS	STEP 3 – ASSESS RISK (RISK = PROBABILITY X CONSEQUENCE)	
STEP 4 – CONTROL HAZARDS			
HAZARD	WHAT CONTROL	BY WHOM	WHO CHECKED
FOLLOW-UP REQUIRED			
COMPLETED BY: _____		SUP/LEADER REVIEW: _____	

SUPERVISOR'S GUIDE
TO
FIELD LEVEL
RISK
ASSESSMENT

PART ONE: SELF STUDY
TRAINING

Written by Esther Hudson (Capability Connections) and Deborah Smith (DSA) for
Construction Owners Association of Alberta, 1998

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consent of the authors or the Construction Owners Association of Alberta.

INTRODUCTION

Field Level Risk Assessment Training for Supervisors

Part 1 –“Supervisor’s Guide to Field Level Risk Assessment: Self -Study Training” (this document)

The purpose of this training is to fully acquaint you with Field Level Risk Assessment. It will help you develop the understanding and skill that you need to use Field Level Risk Assessment and teach it to others. This package can be used by anyone who would like to learn more about Field Level Risk Assessment.

Part 2 – “Supervisor’s Guide to Field Level Risk Assessment – Training Others”

This includes a description of the training, how to prepare to train others in Field Level Risk Assessment, specific lesson plans for delivering the training, how to customize the training, and some tips on how to deliver effective training.

Additional Tools for Use in Doing Field Level Risk Assessment:

The following tools have been developed to assist in doing Field Level Risk Assessment

- The **“Memory Jogger”**
- The **Risk Assessment Matrix**
- The **Field Level Risk Assessment Form**

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COURSE DESCRIPTION

Purpose

To provide you with the knowledge and skills you will need to use Field Level Risk Assessment in your daily work with your crews and to deliver training in Field Level Risk Assessment.

Objectives

After completing this self study training you will be able to:

1. Describe why Field Level Risk Assessment is needed to improve worker health and safety, work effectiveness and company profitability.
2. Describe how Field Level Risk Assessment helps employers and workers fulfill the requirements of the occupational health and safety legislation.
3. Describe what Field Level Risk Assessment is, when it is done, and who does it.
4. Describe the process steps for doing Field Level Risk Assessment.
5. Identify the steps of a job and identify the hazards linked to each job step.
6. Assess the risks linked to the hazards identified in a job using the Risk Assessment Matrix.
7. Identify appropriate controls to put in place, to reduce risk to an acceptable level.
8. Use a form to record Field Level Risk Assessment discussions.
9. Make plans for using Field Level Risk Assessment with your crew on a daily basis.
10. List the benefits that the company and workers experience through using Field Level Risk Assessment.

About This Course

This course is divided into sections. Each section begins with a Learning Objective. The Learning Objective will tell you what you are expected to know or be able to do at the end of the section. There are questions at the end of each section. The questions will relate to the learning objective. The content of the section will give you the information and skill practice that you need to answer the questions.

Most of the questions have “right” answers, others have “best” answers and some are “your opinion” questions. Your opinion questions will help you to think about your own situation. The answers to the questions are given to you to help you check your learning.

SECTION 1: THE PROBLEM

Learning Objective:

Describe why Field Level Risk Assessment is needed to improve worker health and safety, work effectiveness and company profitability.

Some Facts

1. The construction industry has the highest rate of injury accidents of all industries in Alberta.
2. Injury accidents are just one kind of work site incident. Incidents include unplanned events that may or may not result in undesirable consequences.
3. The **real cost** of incidents includes the following:
 - equipment damage
 - environmental damage
 - lost work time
 - higher WCB premiums
 - poor reliability resulting in bad public relations
 - low morale
4. The cost of incidents in your company may be higher than you think. In one Alberta company the direct costs alone for a 15-month period were estimated to be:

• Critical incidents:	2 = \$1,000,000
• Major incidents	57 = \$7,647,735
• Serious incidents	79 = \$1,642,200
• Other incidents	223=\$386,800
TOTAL	\$11,581,535
5. Companies use a variety of methods to reduce incidents and improve worker safety. These include Hazop, Job Safety Analysis, safe work procedures, Failure Modes and Effect Analysis (FMEA) etc. These are applied before a job is started to “build in” safety.
6. There is information that cannot be considered in these planning methods. Information from the job site and the changes that occur as the work is done must also be used to ensure worker safety. When this information is ignored incidents occur.

7. Many incidents could be avoided if workers stopped to think about the hazards that are part of doing the work under the conditions found at the site. Workers could then assess the risks of these hazards and put effective controls in place.
8. Reducing or eliminating hazards and controlling risk is an effective way of improving the way work is done. Work methods can become more reliable and crews become more productive. There is a direct positive impact on worker morale and company profits from these improvements.

Section 1: The Problem – Questions

1. Why is a method of risk assessment required at the field level?

2. How would using a method of field level assessment of risks improve the results that your crew delivers?

Turn the page for the answers.

Answers

1. Other planning methods like Job Safety Analysis do not use information about current job site conditions. When workers use information from other safety and planning methods **and** information about the current work conditions to think about hazards and risks, and put controls in place, they protect themselves and company property from accident or injury.
2. This is a “your opinion “ question. You may have said:
 - Your crew would have better morale.
 - There would be less emotional “down time” because of accidents.
 - Your crew would get more done because less time would be lost due to incidents.
 - Your safety record would improve.
 - There may be fewer equipment problems and damage.
 - Your crew would save time because no one has to fill in for an injured worker.
 - Equipment down time would be reduced or eliminated.

SECTION 2: OCCUPATIONAL HEALTH AND SAFETY REGULATIONS

Learning Objective

Describe how Field Level Risk Assessment helps employers and workers fulfill the requirements of occupational health and safety legislation.

Responsibilities Defined in the Act

Employer Responsibilities

2(1) Every employer shall ensure, as far as it is reasonably practicable for him to do so,

(a) the health and safety of

- workers engaged in the work of that employer, and
- those workers not engaged in the work of that employer but present at the work site at which that work is being carried out, and

(b) that the workers engaged in the work of that employer are aware of their responsibilities and duties under this Act and the regulations.

Worker Responsibilities

(2) Every worker shall, while engaged in an occupation,

(a) take responsible care to protect the health and safety of himself and of other workers present while he is working, and

(b) co-operate with his employer for the purpose of protecting the health and safety of

- himself,
- other workers engaged in the work of the employer, and
- other workers not engaged in the work of that employer but present at the work site at which that work is being carried out.

Safety is everyone's responsibility. Both employers and workers are required by law to do all that is reasonably possible to protect the health and safety of everyone on the work site. Field Level Risk Assessment provides a way that both workers and employers can take action on this responsibility. It helps everyone to be responsible for what happens on the work site.

Section 2: Occupational Health and Safety Regulations - Questions

1. As a supervisor what is your responsibility as a representative of the employer?

2. What are the responsibilities that workers have in the legislation?

3. How would a method of assessing risk at the field level help to take action on these legal responsibilities?

Answers

1. To take every reasonable and possible action to ensure that workers are safe.
2. To take care to ensure their own safety and the safety of others.
3. Taking responsibility for assessing risk and taking action to control risk is a good way to fulfill the legal responsibilities to work safely.

SECTION 3: FIELD LEVEL RISK ASSESSMENT DESCRIBED

Learning Objective

Describe what Field Level Risk Assessment is, when it is done, and who does it.

What is Field Level Risk Assessment?

1. A Part of Your Company's Safety Program

There are many ways of improving safety at work. Many companies have programs that build in safety. These include Job Safety Analysis, Hazop, Failure Modes and Effect Analysis (FMEA), development of work procedures, etc. These methods may be developed before workers arrive at the job site. They change how work is planned and direct how work is to be done. Field Level Risk Assessment is used at the work site during construction. It uses information from the other company safety, risk assessment and planning processes and adds information about conditions at the actual time and location of the construction.

2. An Assessment of Risks at the Job Site

Crews and individual workers do Field Level Risk Assessment before they do work on the job site. They use information that they have been given about the work, how to do it safely and then add information from the job site that day. They think about each job step and identify possible hazards. They assess risk in relation to each job step. They identify ways of controlling the risk and put these controls in place.

3. A Team Discussion and Individual Mental Process

The supervisor leads a discussion about the risks and records the crew's assessment on a form designed for that purpose. The workers do their own risk assessment as they work. Before taking any action, a worker stops and thinks about the hazards, the risks and the controls.

When Do You Do Field Level Risk Assessment?

Workers and Crews do Field Level Risk Assessment:

Any time there is a **change** that affects our work or someone else's:

- At the beginning of a new job or a new shift
- When new workers come on site
- When the information about the work changes (e.g. changed plans, unexpected characteristics of the task such as the configuration of equipment)
- Whenever conditions on the job site change (e.g. weather, availability of tools, etc.)

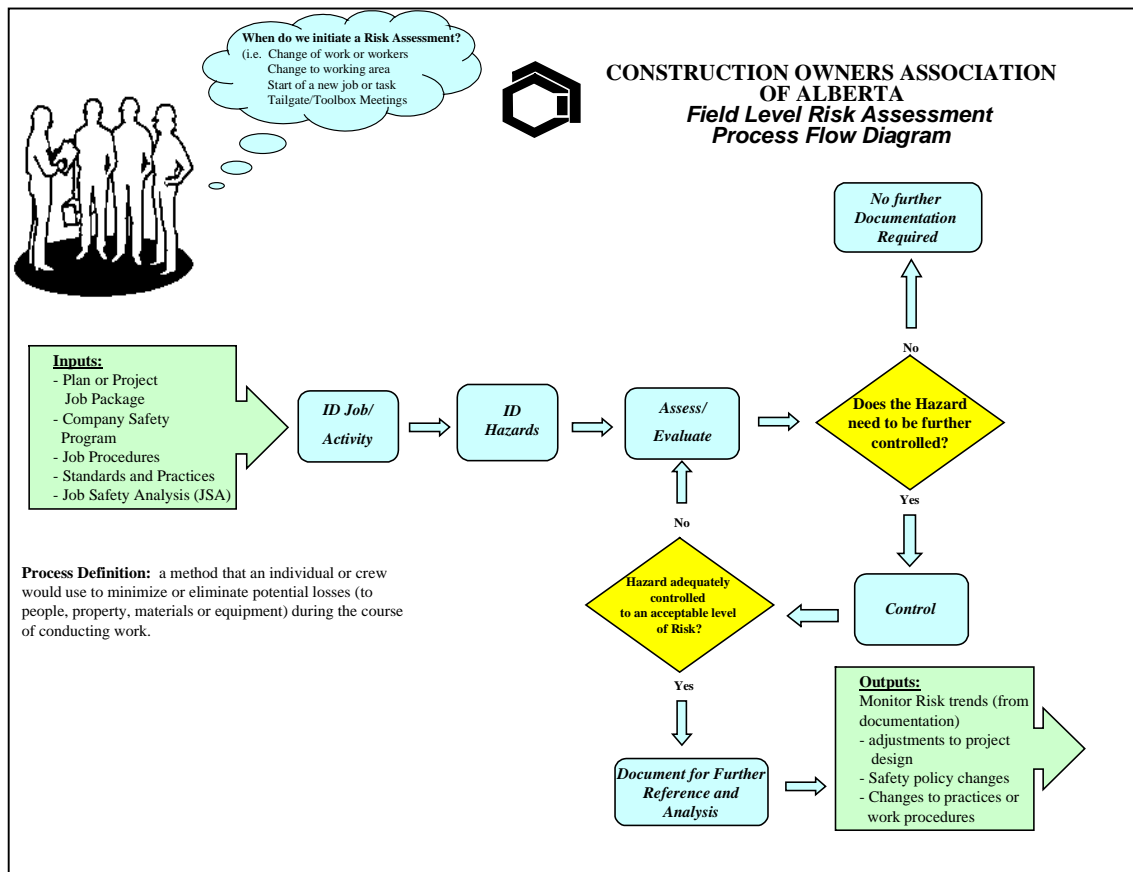
Field Level Risk Assessment Process

Supervisors use **INPUTS** like the project plan, the company safety program, job procedures, and job safety analysis to ensure worker health and safety. They use immediate information about the actual work location to **prepare** for a discussion.

Supervisors lead a discussion with crews to **IDENTIFY** the job steps and **IDENTIFY HAZARDS** associated with **each job step**. Together, supervisors and workers **ASSESS the RISKS** of those hazards using the Risk Assessment Matrix. They **IDENTIFY CONTROLS** that reduce the risk to an acceptable level. For those risks that are not adequately controlled, further control measures are used.

Supervisors **RECORD** the risk assessment discussion. The record is used to identify effective ways to improve the way work is done to increase safety.

Field Level Risk Assessment is done every time conditions, workers or plans change. Crews do Field Level Risk Assessment as a team activity with their supervisor. Workers do the same steps as a habitual mental process as they work.



Section 3: What is Field Level Risk Assessment - Questions

1. How does Field Level Risk Assessment fit into a company's safety program?

2. How is Field Level Risk Assessment a mental process?

3. How is Field Level Risk Assessment a team problem solving process?

4. When is Field Level Risk Assessment done?

5. What are the three central steps in Field Level Risk Assessment?

Answers

1. It uses information from other safety, planning and risk assessment programs and adds field level information about current conditions.
2. Supervisors do Field Level Risk Assessment mentally before leading a discussion with their crew. Individual workers do a mental Field Level Risk Assessment before doing each step of a job.
3. Crews discuss the job, do a risk assessment, and develop controls together before doing work.
4. Anytime there is a change: a change in plans, a change in conditions, a new shift, new workers on site, etc.
5. Identify hazards for each job step, assess level of risk, and identify controls.

SECTION 4: STEPS OF FIELD LEVEL RISK ASSESSMENT

Learning Objective

Describe the process steps for doing Field Level Risk Assessment.

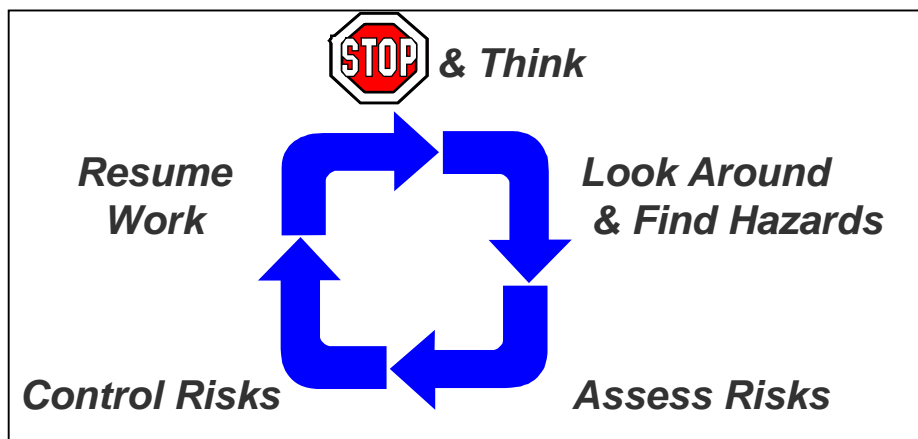
The Process You Do

Whether you are doing a Field Level Risk Assessment as a crew discussion or as a mental activity while you are working, the steps are the same. For **each job step** you:

1. STOP and Think
2. Look Around and Find Hazards
3. Assess Risks
4. Control Risks
5. Resume Work

These are the steps in the process of Field Level Risk Assessment. They are used in crew discussions and used mentally by individuals.

The first step: “Stop and Think” is perhaps the most difficult. Getting the job done, especially one that is familiar is something that a good worker does naturally. Stopping and thinking before doing a task that is very familiar is often difficult. It requires breaking the habit of just “getting to it” and replacing it with **thinking first** about what could happen given the **current situation**. This is a **critical responsibility** of a supervisor.



“Look Around and Find Hazards” is done for **each step of the job**. It can include identifying both the hazards that are part of this kind of work and also hazards that are there because of the specific conditions that exist on the job site.

“Assessing the Risks” is done for **each hazard** that is identified. The hazards are considered in light of how serious the consequences of the incident would be and how likely it is that an incident would occur.

Action is taken to “Control the Risk” for those hazards that present **unacceptable risk**.

NOTE: Each of these steps is dealt with separately in the sections that follow.

**Section 4: Steps in Field Level Risk Assessment -
Questions**

Questions

1. What is the first and often most difficult step to do?

2. Why is the first step difficult to do?

3. What is done for each job step?

Answers

1. It requires stopping and thinking before doing well-known tasks.
2. It is difficult because the action we are going to take is a habit. Thinking about it is not.
3. Identify hazards, assess the risk of each hazard, and identify and put in place controls for each job steps.

SECTION 5: HOW TO IDENTIFY HAZARDS

Learning Objective

Identify the steps of a job and identify the hazards linked to each job step.

1. Stop and Think

- Use the information from safe work planning, safe work procedures, other company programs and years of experience working to identify the hazards inherent in doing the work.
- List the steps to be taken in doing the job. These are the groups of activities that must be taken to complete a job.

Example: Job steps to replace a fluorescent lamp in a busy, poorly lit hallway.

1. Acquire replacement lamp(s), bulb(s) or tube(s) and equipment to do the job
2. Locate fixture with burnt out lighting
3. Gain access to the lighting fixture
4. Turn off the lamp
5. Remove the fixture cover if present
6. Remove the defective lamp (bulb or tube)
7. Install the new lamp (bulb or tube)
8. Replace the fixture cover
9. Turn on the lamp to test it
10. Dispose of the defective lamp

Questions to ask (Note: These questions are on the back of the “Memory Jogger”)

1. Do I clearly understand the steps to this job?
 - What exact job will I do, and what specific job steps does it involve?
2. Am I physically and mentally prepared to do each job step?
 - Am I strong enough to do each of the steps involved in this job?
 - Do I know how to do each step safely?

2. Identify Hazards

- Consider what hazards are linked with each job step. Consider anything that could cause harm to people, property, materials, or the environment.
- Consider: weights, heights, trenches, heat, cold, electricity, explosions, fires, radioactivity, chemicals (liquid, vapour), noise, muscle strains, microbes, sharp objects, vibrations, stress, falling, equipment, etc.

Example: Hazards linked to replacing a fluorescent lamp in a busy and poorly lit hallway

1. Working at elevation
2. Dust disturbance (eyes and breathing)
3. Electrical hazard
4. Breaking glass (lamp and fixture cover)
5. Other workers or traffic below
6. Eye and muscle strain from poor lighting

Note: Some hazards are there because of the nature of the job, e.g. electrical hazard. Some are there because of the specific location where this work is being done i.e. poorly lit and busy hallway. These conditions may not have been predicted.

Questions to ask (Note: These questions are on the back of the “Memory Jogger”)

1. What could go wrong?
 - What could upset my plan for each job step?
2. Is there any danger to myself or others? (any potential danger is a hazard)
 - To equipment?
 - To the environment?
3. What could change and create a new hazard?
 - What could interfere with how I have planned to do the job safely?
4. Could other crews, workers, or conditions pose hazards to me?
 - Will others go through the same mental process and control their hazards?
 - Will their work cause a hazard to me?

Section 5: How to Identify Hazard - Questions

Questions

1. What do you stop and think about before doing a job?

2. What is a hazard? Give some examples.

3. Use the following facts to identify the job steps required to complete this job. Identify the hazards linked to these job steps.

“ You are supervising a crew that is unloading cable from a picker truck flatbed. You require the cable to be on the third level of a building that is in the early stages of construction. There are three people on your crew: a crane operator, a rigger and yourself. There are other workers on site, some of whom are using noisy power tools. Another group is involved in trenching activities nearby.”

- (a) What are the steps required to complete this job?

- (b) What are the hazards linked to these job steps?

Answers

1. The steps required to do the job and the hazards linked to each job step.
2. Anything that would cause harm to people, equipment or the environment, e.g. weights, heights, trenches, heat, cold, electricity, explosions, fires, radioactivity, chemicals (liquid, gas), noise, muscle strains, microbes, sharp objects, vibrations, stress, falling, equipment, etc.
- 3.

(a) Job Steps	(b) Hazards
1. Position the truck	<ul style="list-style-type: none"> • Traffic flow • Swing angles given the location of trenching and the structure itself
2. Attach the cable reels on the sling	<ul style="list-style-type: none"> • Pinch points • Cuts from handling the cable • Failure of the sling cable • Load falling due to improper use of sling • Noise interrupting communication between operator and rigger
3. Connect the tag line	<ul style="list-style-type: none"> • Pinch points
4. Lift the reels to the third level	<ul style="list-style-type: none"> • Pinch points • Cuts from handling the cable • Noise interrupting communication between operator and rigger
5. Remove the reels from the sling	<ul style="list-style-type: none"> • Noise interrupting communication between operator and rigger • Slipping/ rolling of reels

SECTION 6: HOW TO ASSESS RISKS

Learning Objective

Assess the risks linked to the hazards identified in a job using the Risk Assessment Matrix.

Making the Assessment

Factors in Risk Assessment

For each hazard an assessment is needed to find out what the level of risk is. The level of risk includes: (1) how **serious** the consequences of a hazard would be and (2) how **likely** it is to occur.

Questions to ask (Note: These questions are on the back of the “Memory Jogger”)

1. How serious could this be?
 - Could it cause someone to break a bone, be injured? Cause death?
 - Cause damage to equipment?
 - Contaminate the soil or the air?
 - Slow down work?
 - What could go wrong as a result of this hazard?

2. How likely is it to happen?
 - Is it almost certain to happen?
 - Likely to happen?
 - Not very likely?
 - Almost impossible?

A Tool To Use

The **RISK ASSESSMENT MATRIX** will help you assess the level of risk. “Seriousness” is called the consequences. “Likelihood “ is called the probability.

What action you decide to take to control the risk presented by each hazard will depend upon the level of risk.

$$\text{RISK} = \text{Consequences} \times \text{Probability}$$

Risk Assessment Matrix

Consequences: High - Serious; Medium - Moderate; Low - Minor
Probability: High - Often; Medium - Sometimes; Low - Rarely

RISK = CONSEQUENCES X PROBABILITY

		PROBABILITY		
		High	Med.	Low
CONSEQUENCES	High	H	H	M
	Med.	H	M	L
	Low	M	L	L

Find the code for the consequence along the left side and code for the probability along top of the Risk Assessment Matrix. Draw a mental line across the diagram from the consequences code and down the diagram from the probability code. The point where they meet is the code for the assessment of the risk associated with the particular hazard. The outcome of the risk assessment will help to determine the most appropriate kind of control to use.

Example: Replacing a Fluorescent bulb in a busy hallway

Hazard	Consequence	Probability	Risk
Falls from elevation	Serious (H)	Sometimes (M)	High
Dust inhalation or in eyes	Minor (L)	Often (H)	Medium
Electrical Shock	Serious (H)	Rarely (L)	Medium
Cuts from broken glass	Moderate (M)	Sometimes (M)	Medium
Traffic bumping ladder	Serious (H)	Sometimes (M)	High
Eye and muscle strain	Moderate (M)	Often (H)	High

Using the matrix, falls from elevation, traffic bumping ladder and eye and muscle strain have a high risk of resulting in injury. The other hazards represent a medium level of risk.

Section 6: Assess Risks - Questions

Questions

1. What are the two factors that you consider in assessing risk?

2. How do you use the Risk Assessment Matrix?

3. Use the answer for Question #3, Section 5 – Identify Hazards to assess the level of risk associated with each hazard identified. The situation is:

“You are supervising a crew that is unloading cable from a picker truck flatbed. You require the cable to be on the third level of a building that is in the early stages of construction. There are three people on your crew: a crane operator, a rigger and yourself. There are other workers on site, some of whom are using noisy power tools. Another group is involved in trenching activities nearby.”

Hazards	Consequence	Probability	Risk
Pinch points			
Cuts etc from handling the cable			
Load falling due to improper use of sling			
Swing angles given the location of trenching and the structure itself			
Rolling and slipping of reel			
Noise interrupting communication between operator and rigger			

Answers

1. Seriousness (Consequences), Likelihood (Probability)
2. For each hazard, assess how serious the consequences would be (high-serious, medium-moderate, low–minor). Assess how probable the hazard (high-often, medium-sometimes, low-rarely). Find where the two assessments intersect on the matrix.

Hazards	Consequence	Probability	Risk
Pinch points	High (Serious)	Medium (Sometimes)	High
Cuts etc from handling the cable	High (Serious)	Medium (Sometimes)	High
Load falling due to improper use of sling	Low (Minor)	High (Often)	Medium
Swing angles given the location of trenching and the structure itself	Low (Minor)	Medium (Sometimes)	Low
Rolling and slipping of reel			
Noise interrupting communication between operator and rigger	Medium (Moderate)	High (Often)	High

SECTION 7: HOW TO CONTROL RISKS

Learning Objective

Identify appropriate controls to put in place, to reduce risk to an acceptable level

Identify Appropriate Controls

1. Hazard controls need to be appropriate to the level of risk. High risks need very tight controls.
2. Appropriate controls must be put in place before work can proceed.
3. There are some hazards that require specific expertise to identify or apply the appropriate controls. In these situations, supervisors or workers need to stop the task until the needed expertise is applied e.g. air quality test done by occupational hygienist, process equipment isolation by designated site representative.
4. There are three types of controls. These are:
 - **Engineering controls**, e.g. elimination, substitution, guards, process enclosures, automatic shutdown devices, ventilation, and communication devices.
 - **Administrative controls**, e.g. permits, procedures, communication, training and education and work scheduling to minimize the number of workers exposed.
 - **Personal Protective Equipment** e.g. fall protection, ear plugs and safety goggles.
5. It may be necessary to stop work and get help if you can't control the risk.

Questions to ask (Note: These questions are on the back of the “Memory Jogger”)

1. Are permits, written practices, procedures, or work scheduling to reduce number of workers required? e.g. administrative controls
 - Take immediate steps to do this.
2. What can I do to control the hazard?
 - Do I know how to put a control in place for this hazard?
 - Do I know all the required steps in the procedure, code of practice, permit, job plan etc.?
 - Are there any other controls that I think are needed? e.g. personal protective equipment (fall protection, ear plugs, safety goggles etc.), engineering controls (guards, automatic shutdown devices, enclosures, ventilation)
3. Will the controls affect any other part of the job?
 - Does the control introduce a new hazard (e.g. exhaust from a heater when it is cold)

4. Do I need to tell anyone else?
 - Is there anyone else who could be affected by these controls?
 - Is there a need to coordinate work being done by more than one person?
5. Are emergency plans needed?
 - If the identified hazard has a high overall risk, emergency procedures may be needed.
6. Is there someone that I could call to help?
 - Who has the knowledge and skill to help me?

Example: Replacing a Fluorescent Bulb

Hazard	Consequence	Probability	Risk
Falls from elevation	Moderate to serious (medium to high)	Sometimes (medium)	High
Dust inhalation or in eyes	Minor (low)	Often (high)	Medium
Electrical Shock	Serious (high)	Rarely (low)	Medium
Cuts from broken glass	Moderate (Medium)	Sometimes (medium)	Medium
Traffic bumping ladder	Serious (high)	Sometimes (medium)	High
Eye and muscle strain	Moderate (medium)	Often (high)	High

Controls to address risk:

- Second person on job to steady ladders, control traffic and hand tools
- Housekeeping (clean up dust)
- Electrical isolation of light fixture
- PPE...Hard-hat, gloves, goggles, dust mask if necessary
- Warning signs or traffic pylons
- Portable light source

Note that the last control, may create additional hazards that must be controlled. Every control measure has to be thought about to figure out if it might cause an additional hazard.

Section 7: Control Risks - Questions

Questions

1. Name the three kinds of controls and give an example of each.

2. What level of risk requires controls?

3. Given the hazards in the “moving cable” case study what controls should be put in place?

Hazards	Risk	Control
Pinch points		
Cuts etc from handling the cable		
Load falling due to improper use of sling		
Swing angles given the location of trenching and the structure itself		
Noise interrupting communication between operator and rigger		

Answers

1.
 - **Engineering controls.** These are such things as guards, substitution, elimination, process enclosures, automatic shutdown devices and ventilation and communication devices.
 - **Administrative controls.** These are such things as permits, procedures, and work scheduling to minimize the number of workers exposed.
 - **Personal Protective Equipment.** These are items such as fall protection, ear plugs and safety goggles.

2. All risks need to be controlled. The higher the risk the greater the need for controls. hazards

- 3.

Hazards	Risk	Control
Pinch points	High	<ul style="list-style-type: none"> • Communication between operator and rigger • PPE - Gloves
Cuts etc from handling the cable	High	<ul style="list-style-type: none"> • PPE – Gloves
Load falling due to improper use of sling	Medium	<ul style="list-style-type: none"> • Check specifications of sling and crane
Swing angles given the location of trenching and the structure itself	Low	<ul style="list-style-type: none"> • Proper positioning of the truck
Rolling and slipping of reel		<ul style="list-style-type: none"> •
Noise interrupting communication between operator and rigger	High	<ul style="list-style-type: none"> • Use radio for communication • Ensure proper hand signals

SECTION 8: FILLING IN THE FORM

Learning Objective

Use a form to record Field Level Risk Assessment discussions.

Recording Field Level Risk Assessment Discussions

Reasons for Recording Discussions

1. Writing down job steps, hazards, risk assessment and controls forces better thinking.
2. The information can be reviewed to identify if work methods need to be improved to build in controls for hazards.
3. If an incident occurs there will be a record to use in the investigation.

How to Record Discussions

The Construction Owners Association of Alberta has developed a form that can be used to record Field Level Risk Assessment discussions. It is straightforward and uses the basic steps of the Field Level Risk Assessment process. There is a copy of this form on the following page and an example of a form that has been filled in. The example uses the “Changing a Fluorescent Lamp” example.

How to Fill in the Form :

1. This is done at the start of every shift, when new people come on the work site, and when conditions or plans change.
2. The supervisor/ foreman usually fills it in. Whoever fills it in should sign the bottom of the form.
3. The assessment should deal with work that is to be done that day. The assessment should not cover work that will be done another day. Field Level Risk Assessment focuses on current conditions.

4. **Step 1: Identify Main Job Tasks.** The list of job steps should include every step at a reasonable level of detail. The purpose is to identify hazards, not to do a detailed work analysis.
5. **Step 2: Identify Hazards.** Identify and list the hazards in the same order as the job steps. You should be able to see how the hazards relate to the job steps. Consider hazards that relate to the health and safety of workers, to equipment and to the environment.
6. **Remember** Field Level Risk Assessment does not replace all safe work planning. This form is not a place to repeat all the hazards that are inherent in doing the work. These hazards should have been dealt with in the normal safe work planning. **Record the hazards that are there because of the current work site situation and conditions. Record the hazards that have not been discussed and for which controls have not been put in place.**
7. **Step 3: Assess Risk.** Assess the risk of each hazard using the Risk Assessment Matrix. Determine the seriousness of the consequences and the probability that the hazard will result in an incident. Record the assessment as high, medium or low for **each hazard**. List those hazards for which controls will be put in place. Describe the controls. Assign people to put the controls in place. Determine who has the expertise to check the controls. Record these names in the **By Whom** and **Reviewed By** space.
8. If **Follow-up** is required to ensure the controls are adequate or there is a suggestion that permanently controls a recurring hazard, record these actions in the space for "Follow-up Required". If the process identifies a required change to the procedures, this should be noted, so the reviewer can initiate the change.
9. Whoever completes the form (e.g. supervisor, foreman) signs the **Completed By** line.
10. A person assigned by the company to review the forms should sign the **Supervisor/Leader Review** line.

FIELD LEVEL RISK ASSESSMENT			
DATE: _____		PROJECT NAME: _____	
LOCATION: _____		COMPANY: _____	
STEP 1 – IDENTIFY MAIN JOB TASKS	STEP 2 – IDENTIFY HAZARDS	STEP 3 – ASSESS RISK (RISK = CONSEQUENCE X PROBABILITY)	
STEP 4 – CONTROL RISKS			
HAZARD	WHAT CONTROL	BY WHOM	WHO CHECKED
FOLLOW-UP REQUIRED			
COMPLETED BY: _____		SUP/LEADER REVIEW: _____	

FIELD LEVEL RISK ASSESSMENT			
DATE: <u>November 20, 1999</u>		PROJECT NAME: <u>Changing a Fluorescent Lamp</u>	
LOCATION: <u>5th Floor, 10535- 105 Street, Edmonton</u>		COMPANY: <u>ABC Power</u>	
STEP 1 – IDENTIFY MAIN JOB TASKS	STEP 2 – IDENTIFY HAZARDS	STEP 3 – ASSESS RISK (RISK = CONSEQUENCE X PROBABILITY)	
Get Bulbs			
Locate fixture	Working at elevation Dust disturbance(yes/lungs)	Sometimes/serious = high Often/ minor= medium	
Gain access to lighting fixture Remove fixture cover if present	Electrical hazard Breaking glass	Rarely/serious =medium Sometimes/ moderate = medium	
Remove defective lamp Install new lamp	Dropping stuff on others Other workers or traffic below	Sometimes/ moderate = medium Sometimes/moderate = medium	
Replace fixture cover Dispose of defective lamp	Traffic bumping ladder Eye and muscle strain	Sometimes/ serious = high Often/ Moderate = high	
STEP 4 – CONTROL RISK			
HAZARD	WHAT CONTROL	BY WHOM	WHO CHECKED
Traffic	Warning signs or traffic pylons	Self	Self
Working at Elevation	Second person on the job to steady ladder ,control traffic and hand tools	George Wilkey	Self
Electrical hazard	Electrical isolation of light fixture	Self	Self
Dust Broken Glass	PPE – hard hat, gloves, dust mask if necessary, clean dust	Self and George	Self
Eye and muscle strain	Use portable light	George	Self
FOLLOW-UP REQUIRED			
None required.			
COMPLETED BY: <u>Hans Griffin</u>		SUP/LEADER REVIEW: <u>Jim Jones</u>	

Section 8: Filling in the Form - Questions

Questions

1. Name three reasons why it is important to document Field Level Risk Assessment Discussions.

2. Complete a Field Level Risk Assessment Form for the “moving cable” case study. Use the form on page 37.

Answers

1.
 - Writing down job steps, hazards, risk assessment and controls forces better thinking.
 - The information can be reviewed to identify if work methods need to be improved to build in controls for reoccurring hazards.
 - If an incident occurs there will be a record to use in the investigation.

2. The answer is recorded on the form that follows the blank form. Note that hazards have not been included that would be a hazard on any site, i.e. cuts from the cable. You do not have to include such information on the form. Only those hazards relating to the specific conditions on the work site are required. Other hazards such as the cable failing are issues that must be thought about. The failure of the cable relates to specific conditions on the work site as well as being a usual hazard of the job. Your judgement is required to decide what goes on the form as a “day of the job” hazard and what has already been covered in safe work planning and established procedure.

FIELD LEVEL RISK ASSESSMENT			
DATE: _____		PROJECT NAME: _____	
LOCATION: _____		COMPANY: _____	
STEP 1 – IDENTIFY MAIN JOB TASKS	STEP 2 – IDENTIFY HAZARDS	STEP 3 – ASSESS RISK (RISK = CONSEQUENCE X PROBABILITY)	
STEP 4 – CONTROL RISKS			
HAZARD	WHAT CONTROL	BY WHOM	WHO CHECKED
FOLLOW-UP REQUIRED			
COMPLETED BY: _____		SUP/LEADER REVIEW: _____	

ANSWER

FIELD LEVEL RISK ASSESSMENT			
DATE: <u>July 29, 1999</u>		PROJECT NAME: <u>Moving Cable</u>	
LOCATION: <u>1223 Rivera Rd.</u>		COMPANY: <u>Sand Blasters Inc.</u>	
STEP 1 – IDENTIFY MAIN JOB TASKS	STEP 2 – IDENTIFY HAZARDS	STEP 3 – ASSESS RISK (RISK = CONSEQUENCE X PROBABILITY)	
Position the truck	Traffic flow/other people, Swing angles given the location of the trenching and the structure itself	High X Medium = High, Low X Medium = Low	
Load the cable reels on the sling	Pinch points, Failure of the cable, Load falling, noise,	High x Medium = High, High X Low = Medium, Low X High = Medium, Medium X High = High	
Connect the tag line	Pinch points	High X Medium = High,	
Lift the reels to the third level	Noise interrupting communication	Medium x High = High	
Unload the reels from the sling	Noise interrupting communication	Medium X High = High	
STEP 4 – CONTROL RISKS			
HAZARD	WHAT CONTROL	BY WHOM	WHO CHECKED
Pinch Points	Communication between rigger and operator	Saul Bell/ Chad Senger	Amin Suleman
Cuts from handling the cable	PPE – Gloves	Chad Senger	Amin Suleman
Load falling/improper use of sling	Check spec. of sling and crane	Saul Bell	Amin Suleman
Other people on site	Meet with other people Set up a flag area	Amin Suleman	Amin Suleman
Noise interrupting communication	Use radio communication Ensure proper hand signals	Saul Bell / Chad Senger	Amin Suleman
FOLLOW-UP REQUIRED			
COMPLETED BY: <u>Amin Suleman</u>		SUP/LEADER REVIEW: <u>Charlie Grey</u>	

SECTION 9: SUPERVISING THE USE OF FIELD LEVEL RISK ASSESSMENT

Learning Objective

Make plans for using Field Level Risk Assessment with your crew on a daily basis.

How to Lead Field Level Risk Assessment Discussions

1. The objective of having a crew discussion is to ensure that the work is conducted safely and to encourage workers to take greater responsibility for safety.
2. Make sure that your crew understands the objectives of doing Field Level Risk Assessment. Reassure them of this purpose.
3. Prepare for the meeting by thinking about the work to be done, reviewing safe work plans, considering the procedures/standards that affect the work to be done and doing your own analysis of the job steps, hazards, etc.
4. Call the crew together and tell them they will be doing a Field Level Risk Assessment with you.
5. Describe the work to be done and ask them to identify the job steps.
6. Work through the Field Level Risk Assessment process together. Provide information yourself only when something is missed by the crew.
7. Use questions to get information and ideas, and to clarify facts.
8. Repeat the main points of the information the crew gives, using different words, to be sure you understood. Record the discussion on the form. Ensure the workers have access to the form.
9. Use questions to increase each worker's ability to critically examine possibilities.
10. Summarize the assessment and plans of the group. Direct individuals who are responsible for putting controls in place to do so.
11. Record any suggestions that the crew has for improving safety or work methods on an ongoing basis.
12. Remind the crew to do the process while they are working and to stop if uncontrolled hazards are identified.
13. Ask regularly how the discussions could be improved.

How to Coach Workers in the Use of Field Level Risk Assessment

Field Level Risk Assessment can present a challenge for some workers. It represents a change.

Field Level Risk Assessment needs:

1. Workers to stop and **think before doing** even routine tasks.

Building this new habit will need persistent reminding from you.

2. **Critical thinking skills** that may be underdeveloped in some workers.

Thinking through job steps to assess risks will take practice. Crew discussions will help develop this ability. Using questions to push thinking is essential.

3. Individuals to **accept responsibility** for thinking and taking action.

Asking questions to help workers make assessments and put controls in place instead of telling them what to do will help them accept responsibility. Refraining from telling them what to do may be a bit challenging for you if this way of working is new to you and your crew. Recognizing and rewarding their efforts is important and will motivate them too.

4. Workers to be willing to **challenge authority** and raise difficult issues.

It may be difficult for some workers to challenge how things are being done. Sometimes they will be right and sometimes they will be wrong. Showing that you are willing to listen and consider their ideas is important. Using their mistakes as times to learn rather than times for punishment, will encourage good thinking and help them develop the courage to act on their assessments.

How to Monitor the Use of Field Level Risk Assessment

1. Lead Field Level Risk Assessment discussions **every time something changes**. This will help you to monitor how workers are thinking and using the process.
2. Observe them as they change work activities and **ask them** what hazards they are considering.
3. During inspections, audits or incident investigations, ask workers what hazards were identified for this job.
4. Use **formal performance discussions**, if your company has these, to get feedback on their use of Field Level Risk Assessment.
5. **Use safety meetings** to talk about doing Field Level Risk Assessment. This can be a time for both two-way feedback and encouragement.

How to Use Field Level Risk Assessment to Improve How Work Is Done

1. Each time you have a Field Level Risk Assessment discussion with your crew you are taking time to plan and take action on doing work more safely. This will **reduce loss from incidents**. These discussions are time well spent.
2. Each time you record a discussion you can write down the suggestions for ways to reduce hazards. Use these ideas when your crew is doing similar work. You will **learn from these discussions**, especially if you critically examine how you habitually approach a high-risk activity. With new thinking you may be able to find safer and more efficient ways to do the work.
3. You may recognize **trends or patterns** in the hazards that you face regularly. These trends may be opportunities for ongoing controls, e.g. new or better procedures.

Section 9: Supervising the Use of Field Level Risk Assessment - Questions

Question

1. Describe one action you are going to take to:

(a) Lead effective Field Level Risk Assessment discussions.

(b) Coach workers in using Field Level Risk Assessments.

(c) Monitor the use of Field Level Risk Assessment.

(d) Use Field Level Risk Assessment to improve how work is done.

Answers

There are no right answers here. Develop your own personal objectives using the ideas in this session. Good luck using Field Level Risk Assessment to become a more effective and successful supervisor.

SECTION 10: BENEFITS OF FIELD LEVEL RISK ASSESSMENT

Learning Objective

List the benefits the company and workers of using Field Level Risk Assessment.

Benefits for Companies:

Below is a list of benefits that companies can experience as a result supporting their workers in the daily use of Field Level Risk Assessment.

1. Improved productivity. Work methods improve.
2. Direct cost savings
3. WCB premium reduction
4. Decreased costs to pass on to customers, a competitive edge
5. Better data to improve company safety
6. Reduction in the “emotional” costs of accidents and injuries
7. Increase trust and confidence of workers
8. Due diligence

For Workers:

Below are the benefits that workers experience as a result of habitually using Field Level Risk Assessment.

1. Reduced probability of injuries
2. More security for their families
3. Improved morale
4. Opportunity to make work place improvements
5. Opportunity for recognition of increased contribution to the company
6. Improved ability to think critically

Section 10: Benefits of Field Level Risk Assessment Questions

Questions

1. Name three benefits of using Field Level Risk Assessment, for companies.

2. Name three benefits that Field Level Risk Assessment provides workers.

Answers

See the benefits listed on the previous page.

Congratulations!

**You have finished Part 1 –
Supervisor's Guide to Field Level
Risk Assessment Self-Study
Training**

See Part 2 - Training Others

SUPERVISOR'S GUIDE

TO

FIELD LEVEL RISK ASSESSMENT

PART 2: TRAINING OTHERS

Written by Esther Hudson (Capability Connections) and Deborah Smith (DSA) for Construction Owners Association of Alberta, 1998

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INTRODUCTION

Field Level Risk Assessment Training for Supervisors is in two parts:

Part 1 – “Supervisor’s Guide to Field Level Risk Assessment: Self -Study Training”

The purpose of this training is to fully acquaint you with Field Level Risk Assessment. It will help you develop the understanding and skill that you need to use Field Level Risk Assessment and prepare you to teach others. This package can be used by anyone who would like to learn more about Field Level Risk Assessment.

Part 2 – “Supervisor’s Guide to Field Level Risk Assessment – Training Others” (This document)

This includes a description of the Field Level Risk Assessment Workshop and how to prepare to deliver this training. It includes specific lesson plans for delivering the training, information on how to customize the training for your company and tips on how to deliver effective training.

Additional Tools for Use in Doing Field Level Risk Assessment:

The following tools have been developed to assist in doing Field Level Risk Assessment

- The **“Memory Jogger”** card
- The **Risk Assessment Matrix**
- The **Field Level Risk Assessment Form**

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DESCRIPTION OF THE TRAINING

Purpose of the Training

The purpose of the Field Level Risk Assessment Workshop is:

To prepare work site personnel to use the Field Level Risk Assessment process, in a habitual way, to identify potential hazards, assess their magnitude, and decide if controls are needed.

Target Group to be Trained

All field level workers on construction sites in Alberta.

Group Size

6 to 12 participants is optimum. It is difficult to help individual workers develop skills when the group is larger.

Learning Objectives of the Training

As a result of the course, participants will be able to:

1. Identify and describe a hazard, an assessment of risk, and a control.
2. Describe the process of Field Level Risk Assessment.
3. List the two components of Field Level Risk Assessment.
4. Identify situations where the Field Level Risk Assessment process should be used.
5. Use the "Memory Jogger" questions to do a Field Level Risk Assessment.
6. Use the Risk Assessment Matrix to assess the risk in a situation.
7. Discuss the kinds of hazards that are possible on a work site.
8. Discuss the types of controls that can be used to keep risk to an acceptable level.
9. Demonstrate the ability to do Field Level Risk Assessment in a group using a case study.
10. Discuss the responsibilities they have to use Field Level Risk Assessment.
11. Describe how Field Level Risk Assessment will be used in this company.
12. Discuss the barriers to using Field Level Risk Assessment habitually and the supports that are available to overcome these barriers.
13. List the benefits of making Field Level Risk Assessment a habit on every job.

Training Delivery Requirements

Time Format

This workshop is divided into four lessons. The four lessons can be delivered in 1, two and one half-hour session, 2 one-hour sessions, or 4 one half-hour sessions. What format you choose will depend upon what fits into your work scheduling the best. The two and one half-hour session includes breaks. This format uses worker time most efficiently and provides the best learning opportunity.

Shorter sessions require you to review the previous lessons before you introduce new material. There is the opportunity between the shorter sessions to practice the new skills learned in the training. This can make the training more effective.

You can spend more time than is allocated in the lesson plans, if it is available. This will allow for more discussion time and extra practice. More time will help you to make sure that workers have developed the level of skill in Field Level Risk Assessment your company expects.

Equipment/ Material Requirements

- If you have access to an **overhead projector and screen** place them in a location that will allow good visibility by all participants. If you are unable to use an overhead, photocopy the overhead masters and give them to the workers for use in the training.
- A **flipchart** is also required. If a flipchart stand is not available tape **flipchart paper** on a wall. You will need **flipchart pens** if you are using the flipchart.
- For lessons 2 and 3, provide adequate space to allow participants to arrange themselves comfortably into **groups of 3**.
- The “**Worker’s Guide to Field Level Risk Assessment**”, has been developed for use by the workers during the training. This contains the “**Risk Assessment Matrix**” that is required during the training. Your company may wish to produce this guide as a pocket-sized booklet for use after the workshop.
- “**Memory Jogger**” cards should also be distributed to each worker during the training. The master for this card is in “Section 5: How to Customize the Training”.
- You may wish to photocopy the **Field Level Risk Assessment Form**. Although supervisors, not workers, are expected to use this form, it may be useful in lesson 3 during the practice session. A master for this is also found at the end of this document.

Preparing Workers for the Training

The “**Manager’s Handbook**” provides suggestions about how to inform workers about Field Level Risk Assessment prior to delivering the training. It is important that training is not the first time that workers hear about Field Level Risk Assessment. Field Level Risk Assessment needs to be positioned as an important tool for worker health and safety and company effectiveness, before workers come to training.

If this has not occurred, it is important that you tell workers what the training is about, why it is being delivered and where they are expected to attend. This can be done verbally or in writing.

Agenda Overview

Module One Introduction to the Field Level Risk Assessment

Introductions

The Need for Field Level Risk Assessment : Examples

Description of Field Level Risk Assessment

When to Use Field Level Risk Assessment

Module Two The Mental Process

Using the Memory Jogger

How to Do Field Level Risk Assessment

Case Study

Module Three Doing Field Level Risk Assessment

Kind of Hazards and Controls

Case Study

Module Four Responsibilities

Fit with Company Occupational Health and Safety Program

Responsibilities

Barriers, Supports and Benefits

HOW TO PREPARE YOURSELF FOR THE TRAINING

1. Complete the Supervisor's Guide to Field Level Risk Assessment-Part 1: Self Study Training

This will help you to develop your own skills in Field Level Risk Assessment. Many of the exercises in the self-study are also used in the worker workshop training. Completing these exercises on your own will make it easier for you to teach others the skills.

2. Read through the lesson plans.

This will give you an overview of the training. It will help you assess how much preparation you will need.

3. Answer the following questions about the Field Level Risk Assessment training being delivered in your company.

- Who will be trained in your company?
- What will the format of the training be? One (two and half hour) session, two (one hour) sessions or four (one half-hour) sessions?
- Where will the training be conducted?
- Who will you be training?
- What tools are being provided by the company? The "Memory Jogger" card? The "Worker's Guide to Field Level Risk Assessment"? The "Field Level Risk Assessment Form" with attached copies of the "Risk Assessment Matrix"?

4. Develop company specific case studies to use in the training.

Using real examples from the work that you do will help make the training interesting and practical. How to develop company specific case studies for this purpose is "How to Customize the Training."

5. Add information about your company's approach to Field Level Risk Assessment to Lesson Plan #4.

The training requires you to tell workers about how your company is implementing Field Level Risk Assessment. To be able to do this, you will need to have answers to the following questions:

- What is the company trying to achieve by using Field Level Risk Assessment?
- Have targets been set for improvements? If so what are they?
- How important is reaching these targets to the company?
- How does management see Field Level Risk Assessment fitting with the current safety program?
- What are the expectations of supervisors? e.g. Will filling in forms be required? Will suggestions for work improvements?
- What are the expectations of workers? e.g. Will they be required to make suggestions for work improvements? To fill in forms in a supervisors absence?
- What standards have been set for Field Level Risk Assessment? e.g. How completely should the form be filled out? How often should forms be submitted and to whom? How will these be monitored?

- Will questions be asked about Field Level Risk Assessment be asked during safety audits? During formal performance reviews?
- If forms are being used in the company, will someone review the forms?
- Will there be rewards for doing Field Level Risk Assessment well?

6. Make logistical arrangements for the training.

- Book a suitable room for the training.
- Arrange for refreshments (beverages/doughnuts).

7. Prepare worker materials.

- Photocopy “Worker’s Guide to Field Level Risk Assessment” or access booklets from your company.
- Make copies of the overheads for workers if you are not using an overhead projector.
- Access “Memory Jogger” cards or photocopy masters for each worker.

8. Practice using the lesson plans

Become familiar with what the lessons require you to teach and decide how you are going to use the lesson plans. Some people like to make a shortened outline for themselves. Others make notes or highlight key ideas or actions. You may wish to adapt the lessons to your own style of delivery or the needs of the group /groups you are training.

Three weeks before the workshop

1. Read the lessons.
2. Complete Part 1 – Self Study Training in Field Level Risk Assessment
3. Find out about the training plans and the application of Field Level Risk Assessment in your company.
4. Prepare company specific content for the training.
5. Inform workers who will be attending the training about the training.

One week before the workshop

1. Become very familiar with the lesson plan.
2. Prepare overhead transparencies.
3. Photocopy “Guide to Field Level Risk Assessment”.
4. Produce “Memory Jogger” cards.
5. Book a room and arrange for overhead projector, screen, flipchart.
6. Arrange for coffee, juice and doughnuts.

On the day of the workshop

1. Set-up room with overhead projector, screen, flipchart, tables and chairs.
2. Bring Lesson Plans, Overheads, Guide to Field Level Risk Assessment and “Memory Jogger” cards to room.
3. Set up beverages (coffee, juice, etc.) and doughnuts.

Lesson #1 – Introduction to Field Level Risk Assessment

Objectives Lesson # 1

1. Identify and describe a hazard, an assessment of risk and a control.
2. Describe the process of Field Level Risk Assessment.
3. List the two components of Field Level Risk Assessment.
4. Identify situations where the Field Level Risk Assessment process should be used.

Lesson Plan #1 Introduction to Field Level Risk Assessment

Time	Objective	Content	Method	Helps
00 minutes	Welcome	<ul style="list-style-type: none"> • Welcome participants to course. Invite everyone to get coffee or juice and doughnuts. 	Greet and welcome to everyone	Overhead #1 – Welcome
01 minutes	Introduction	<ul style="list-style-type: none"> • Introduce self. Include experience/background. • State purpose of the course “ to prepare work site personnel to use Field Level Risk Assessment process, in a habitual way, to identify potential hazards, assess their magnitude, and decide if controls are needed.” 	<i>Comment: For presentations by supervisors, this will be “found time” because everyone is already acquainted.</i>	
03 minutes	Identify and describe a hazard, and assessment of risk and a control	<ul style="list-style-type: none"> • Read “Moving Used Building Materials” Case • Ask participants what went wrong. Get a reply from at least 2 or 3 people. Invite others to give their ideas. • Lead the discussion to the realization that the workers <u>didn’t recognize the hazard.</u> • Write RECOGNIZE HAZARD on the flip chart. • Explain Hazard. A hazard is a danger to people, property, materials or the environment. 	Read and Discuss Case Study	Overhead #2 – Moving Used Building Materials Case Flip chart : Recognizing Hazard

Time	Objective	Content	Method	Helps
		<ul style="list-style-type: none"> • Read “Removal of the Heat Exchanger” Case • Ask participants what went wrong. Get a reply from at least 2 or 3 people. Invite others to give their ideas. • Lead the discussion to the realization that the worker <u>didn't realize how serious the hazard was</u> and failed to steps to control it. • Write ASSESS RISK on the flip chart. • Explain that when we assess a hazard we are assessing risk, considering the possible consequences of a hazard and how likely it is to happen. 	<p>Read and Discuss Case Study</p>	<p>Overhead #3 Removal of the Heat Exchanger Tube Case Flip chart - Assess Risk</p>
		<ul style="list-style-type: none"> • Read the “ Removal of the Rope Sling” Case • Ask participants what went wrong. Get a reply from at least 2 or 3 people. Invite others to give their ideas. • Lead the discussion to the realization that there had been a change in the plan. Another worker had been added. Additional hazards had not been identified. The risk was not assessed and adequate controls were not put into place. • Write CONTROL RISK on the flipchart • Explain the term “controls”. Controls are actions aimed at reducing risks to levels that are acceptable. 	<p>Read and Discuss Case Study</p>	<p>Overhead #4 Removal of the Rope Sling Case Flip chart - Control Risk</p>
<p>15 minutes</p>	<p>Describe the process of Field Level Risk Assessment</p>	<ul style="list-style-type: none"> • State that Field Level Risk Assessment is a simple process, carried out every day on every job by every person working there. It is a way to identify hazards, assess the seriousness of the risks and control the risk. 	<p>Introduce the Field Level Risk Assessment Model</p>	<p>Overhead #5 Field Level Risk Assessment Is:</p>

Time	Objective	Content	Method	Helps
		<ul style="list-style-type: none"> • State that : • It does not replace other safe work planning. • It adds information about new hazards or “day of the job hazards”. • It is done each time something changes. • It involves identifying each step associated with the job, • It involves identifying the hazards associated with each step. • For each hazard, the crew determines how serious the risk is. • Then they decide how it will be controlled. <p><i>Comment: Emphasize this information.</i></p>	Discuss Elements of the Model	Overhead #6 Field Level Risk Assessment
		<ul style="list-style-type: none"> • Hand out the “Memory Jogger” cards. State that the process requires periodically stopping and thinking about what’s going on or what’s about to happen. Refer to the five steps of the model on the front of the card. 	Use the Memory Jogger card to review the Field Level Risk Assessment Process	Memory Jogger Card
15 minutes	List the two components of Field Level Risk Assessment (team and individual)	<ul style="list-style-type: none"> • State that the team part is done by the whole crew – together – on the day of the job – before the job starts. 	Present the Team Part of Model	Overhead #7 The Team Part
		<ul style="list-style-type: none"> • State that the foreman writes the information generated by the crew on the form and the form is posted where everyone can refer to it. 		Overhead #8 Field Level Risk Assessment Form

Time	Objective	Content	Method	Helps
		<ul style="list-style-type: none"> State that each individual does their own Field Level Risk Assessment as a mental process while they are working. State that, like the team part, it involves identifying the individual tasks to be done and the hazards associated with each task, assessing how serious the hazards are, and checking to be sure you're using the appropriate controls. It's an individual, mental process. <p><i>Comment: Emphasize this information</i></p>	<p>Present the Mental Process of Field Level Risk Assessment</p>	<p>Overhead #9 Individual Part</p>
23 minutes	<p>Identify situations where Field Level Risk Assessment should be used</p>	<ul style="list-style-type: none"> Ask, "What are some examples of situations where there were hazards that could not have been predicted before we got on site? (<i>Have some specific examples of your own ready to get the group started.</i>) Ask, "What would be different in those situations if we did Field Level Risk Assessment?" (<i>We would work more safely and probably save time.</i>) Ask, "When should we do Field Level Risk Assessment? <i>Expect to hear at least the following:</i> <ul style="list-style-type: none"> <i>At the beginning of every job</i> <i>At the beginning of every shift</i> <i>Whenever conditions change, such as new personnel involved in the job, weather changes, equipment breaks down, etc.</i> <i>When participating in the "group part"</i> <i>If any of these are not mentioned by the participants, add them as suggestions of your own.</i> 	<p>Apply Field Level Risk Assessment to current company work situations</p>	<p>Worker's Guide to Field Level Risk Assessment page 6</p>

Supervisor's Guide to Field Level Risk Assessment Part 2: Training Others

Time	Objective	Content	Method	Helps
29 minutes	Direct participants to the benefits of Field Level Risk Assessment	<ul style="list-style-type: none"> • Ask participants if they can see any benefits to this process. • Record the participants' ideas about benefits on the second flip chart. • Expect to hear things like: Less likely to get hurt • Get job done, more efficiently, faster, right, etc. • Note this step occurs in each of the lessons as a review and a way of checking on workers feelings. It should a brief discussion until the end of the fourth lesson. 	Used only for the four session format	Flip Chart Benefits
30 minutes	END	<ul style="list-style-type: none"> • Encourage workers to try to “stop and think” while they are doing work. 	Used only for the four session format	

Lesson #2 – The Mental Process

Objectives Lesson #2

1. Use the Memory Jogger questions to do a Field Level Risk Assessment.
2. Use the Risk Assessment Matrix to assess the risk in a situation.

Lesson Plan #2 – The Mental Process

Time	Objective	Content	Method	Helps
00 minutes	Welcome	<ul style="list-style-type: none"> • Welcome participants to the course. Invite everyone to get coffee, juice and doughnuts. 	Greeting/Announcement	Overhead #1 Welcome
01 minute	Review the Field Level Risk Assessment Model	<ul style="list-style-type: none"> • Ask “ What is Field Level Risk Assessment?” Response should include: A way of identifying hazards, assessing how serious the risk is and identifying ways of controlling the risk. It happens on the day of the job and is done by the team and by individuals. • Direct participants to take out their Memory Jogger cards. If participants don't have their “Memory Jogger” card with them, give them a new one. 	Optional : Use in four session format only	Overhead #5 Field Level Risk Assessment Is Memory Jogger cards

Time	Objective	Content	Method	Helps
	<p>Use the Memory Jogger questions to do a Field Level Risk Assessment.</p>	<ul style="list-style-type: none"> Explain that we are going to practice the skills needed to do an effective Field Level Risk Assessment. We are going to use the questions on the back of the Memory Jogger to help. We will work through a case study to practice the skills. All of the questions we will be discussing are found in the Worker’s Guide to Field Level Risk Assessment. 	<p>Introduction to the back side of the “Memory Jogger”</p>	<p>Memory Jogger or Worker’s Guide to Field Level Risk Assessment. Page 7-9</p>
		<ul style="list-style-type: none"> Read the questions used to <u>identify hazards</u> on the back of Memory Jogger. There are really 2 things to be identified: a) the individual tasks involved in each job, and b) the hazards associated with each task. Usually, each individual task will have specific hazards associated with it. 	<p>Review Questions</p>	<p>Overhead #10 Identifying Hazards</p>
		<ul style="list-style-type: none"> Read “Fluorescent Lamp Case” using the overhead. Note: A company specific case study can be used here. See the section “How to Customize the Training” in this manual to learn how to develop a case study. The Fluorescent Lamp Case was used in Supervisor’s Guide to Field Level Risk Assessment Part 1: Self-Study Training. You may wish to refer to this during your preparations. 	<p>Present Case Study</p>	<p>Overhead #11 Fluorescent Lamp Case</p>

Time	Objective	Content	Method	Helps
		<ul style="list-style-type: none"> • Read the first question on the back of the Memory Jogger and/or the overhead: <i>Do I clearly understand my job for the day? What exact job am I doing, and what specific tasks does it involve?</i> 	<p>Read first question</p>	<p>“Memory Jogger” or “Worker Guide to Field Level Risk Assessment” page 7 Overhead #12 Identify Hazards-Questions</p>
	<p>Use the Memory Jogger questions to do a Field Level Risk Assessment</p>	<ul style="list-style-type: none"> • Ask “ What are the job steps (tasks) that it takes to replace a light bulb? Help the group identify these steps and record them on the flipchart or on the blank overhead 	<p>Lead a Group Discussion of Job Steps and record steps on a the flipchart or the overhead</p>	<p>Flipchart: Job Steps</p>

Time	Objective	Content	Method	Helps
		<ul style="list-style-type: none"> • Identify the hazards. Explain that we will use the questions to identify the hazards in each job step. You may wish to read all of the questions and then ask what hazards are linked with the job steps we identified or ask what hazards first. The hazards that the group may identify are (You can just read and discuss these from the overhead): <ul style="list-style-type: none"> • Working at elevation • Dust disturbance (eyes and breathing) • Electrical hazard • Breaking glass (bulb and fixture cover) • Other workers or traffic below • Eye / muscle strain from poor lighting <p>Note: Some hazards are there because of the nature of the job e.g. electrical hazard. Some are there because of the specific situation where this work is being done i.e. poorly lit and busy hallway. These conditions would not have been predicted in a job plan. Use this to emphasize the “day of the job” conditions identified in Field Level Risk Assessment.</p>	<p>Lead a discussion to identify the hazards in the case study</p>	<p>Overhead #13 Hazards for Replacing a Fluorescent Lamp</p>
	<p>Use the Memory Jogger questions to do a Field Level Risk Assessment.</p>	<p><i>Am I physically and mentally prepared to do each task? Am I strong enough to do each of the tasks involved in this job? Do I know how to do them? Do I have the individual tasks that need to be done, and the way I'm going to do them, clear in my mind?</i></p>	<p>Present and Discuss These Questions</p>	<p>Overhead: #12 Identify Hazard Questions</p>
		<p><i>What could go wrong? What could happen to upset my plan for the way I will do each individual task?</i></p>	<p>Present and Discuss These Questions</p>	

Time	Objective	Content	Method	Helps
	Use the Memory Jogger questions to do a Field Level Risk Assessment.	<i>Is there danger to myself or others?</i> to the equipment? to the environment? Any potential danger is a hazard.	Present and Discuss These Questions	
		<i>What could change and create a new hazard?</i> The procedure you have in your head will allow you to do each task safely. What could happen to interfere with that procedure?	Present and Discuss These Questions	
		<i>Could other crews, workers, or conditions pose hazards to me?</i> Others will go through the same mental process, and decide how to control the hazards they've identified, but will work cause a hazard to you?	Present and Discuss These Questions	
		<ul style="list-style-type: none"> • Ask "What would be the result if our crew used these questions on a regular basis. Expect some negative responses like it would take more time and positive responses like, we would work more safely. 	Lead a Discussion About Using These Questions	

Time	Objective	Content	Method	Helps
15 minutes	Use the Memory Jogger questions to do a Field Level Risk Assessment.	<ul style="list-style-type: none"> Review the questions used to assess risks. Re-state each question while pointing to it. Each of these questions has to be asked about each hazard that has been identified. <p><i>How serious could this be?</i> Cause someone to break a bone, damage the equipment contaminate the soil, cause a death, slow down the work, etc.? Do you consider it to be serious, moderate or minor?</p> <p><i>How likely is it to happen?</i> Is it almost certain to happen, pretty likely to happen, almost impossible, not very likely, etc.? Do you expect it to happen often, sometimes, or rarely?</p>	Review the Assess Risk Questions	Overhead #14 Assessing Risk Questions
		<p>Explain the terms on the Risk Assessment Matrix</p> <ul style="list-style-type: none"> The seriousness – <i>how serious could be this be</i>– is called <u>consequences</u>. H designates serious consequences. M designates moderate consequences. And L designates minor consequences. Point to the letters, “H”, “M”, and “L” on the Risk Assessment Tool as you describe them. The likelihood – <i>how likely it is to happen</i> – is called <u>probability</u>. Something that could occur often, is coded as H. Something that will sometimes occur, is coded as M. Something that will rarely occur, is coded as L. Point to the letters, “H”, “M”, and “L” on the Risk Assessment Tool as you describe them. 	Explain the Risk Assessment Matrix	Overhead # 15 The Risk Assessment Matrix

Time	Objective	Content	Method	Helps
	<p>Use the Memory Jogger questions to do a Field Level Risk Assessment.</p>	<ul style="list-style-type: none"> Review the use of the <u>Risk Assessment Matrix</u>. Trace the “mental lines” on the overhead as you explain them. “Find the code for the <u>consequences</u> and the <u>probability</u> along the left side and the top of the Risk Assessment Tool. Draw a mental line across the diagram from the consequences code and down the diagram from the probability code. The point where they meet is the code for the assessment of the risk associated with this particular hazard.” Point to the risk assessment codes, H, M, and L, in the bottom right hand nine squares of the tool. H means high risk; M means medium risk; L means low risk. The outcome of the risk assessment will help to determine the most appropriate <u>kind</u> of controls to use. 	<p>Demonstrate the Use of the Risk Assessment Matrix</p>	<p>Overhead #15 Risk Assessment Matrix</p>
		<ul style="list-style-type: none"> Ask “ What is the level of risk associated with each hazard in the ‘ Replacing a Light Bulb’ case study?” You may wish to use the blank overhead and have the group assess the level of risk or you can discuss the assessment that the is on the overhead. While using the overhead, direct participants to use the Risk Assessment Matrix in the Worker’s Guide to Field Level Risk Assessment Page 8. 	<p>Lead a Discussion using the Risk Assessment Matrix</p>	<p>Overhead #16 and #17 Assessing Risk in Replacing a Fluorescent Lamp (blank and the answers) Worker’s Guide to Field Level Risk Assessment Page 8</p>
		<ul style="list-style-type: none"> Ask “ What would be the result if we used this method of assessing risk while we are doing work?” 	<p>Lead a Discussion About Using the Risk Assessment Matrix</p>	

Time	Objective	Content	Method	Helps
23 minutes	<p>Use the Memory Jogger questions to do a Field Level Risk Assessment.</p>	<ul style="list-style-type: none"> <p>Review the questions used for ensuring <u>control of risk</u>. Many controls are dictated by standard operating procedures, codes of practice, permit requirements, job plans, etc. Others are decided at team meetings. And some are decided by individual workers when they set out to perform a task.</p> <p><i>Are permits, written practices, procedures, etc. required? If so, take immediate steps to meet these requirements.</i></p> <p><i>What can I do to control the hazard? Have you followed all the required steps in the procedure, code of practice, permit, job plan, etc.? Are there any other controls that you think are needed?</i></p> <p><i>Will the control affect another part of the task being done? Think about the tasks being performed by you and others. The control of one hazard may be the cause of another. If you think the controls in place may have a negative effect to some other part of the work, you may have to contact the supervisor.</i></p> <p><i>Do I need to tell anyone else? Is there anyone else who may be affected by the controls you're using? Is there a need for coordination of tasks done by more than one person?</i></p> <p><i>Is there someone I could call for help? Who has the knowledge and skill to help me?</i></p> 	<p>Review the “Control of Risk” questions</p>	<p>Overhead #18 Controlling Risk Questions</p>

Time	Objective	Content	Method	Helps
	Use the Memory Jogger questions to do a Field Level Risk Assessment.	<ul style="list-style-type: none"> • Review the questions used for ensuring <u>Control of Risk</u>. (continued) <p><i>Are emergency response plans needed?</i> If the identified hazard has a potential for “high consequences”, emergency procedures may be needed.</p>	Review the “Control of Risk” questions	Overhead #18 Controlling Risk Questions
	Direct participants to identify the benefits of Field Level Risk Assessment	<ul style="list-style-type: none"> • Ask participants if they can see any benefits to this process. • Record the participants’ ideas about benefits on the flip chart. • Expect to hear things like: Less likely to get hurt Get job done, more efficiently, faster, right, etc. • Note this step occurs in each of the lessons as a review and a way of checking on workers ‘feelings. It should a brief discussion until the end of the fourth lesson. 	Use this in the two and /or four session versions	Flipchart: Benefits
30 minutes	END/ Break	<ul style="list-style-type: none"> • Encourage workers to use the questions on the back of their memory jogger card at least once in before the next session. 	Use only in the two or four session format Take a break in the one session format	

Lesson #3 – Doing Field Level Risk Assessment

Objectives:

1. Discuss the kinds of hazards that are possible on a work site.
2. Discuss the types of controls that can be used to keep risk to an acceptable level.
3. Demonstrate ability to do Field Level Risk Assessment in a group using a case study.

Resources Required:

This lesson requires a case study example using work with which your group is familiar . To prepare for this exercise read “ How to Customize the Training” section. The lesson plan asks for this case study to be made into an overhead. If this is not possible, post in on a flipchart. There is also a generic case study for you to use if you are unable to develop your own.

Time	Objective	Content	Method	Helps
00 minutes	Welcome	<ul style="list-style-type: none"> • Welcome participants to the course. Invite everyone to get coffee, juice and doughnuts. 	Greeting/Announcement	Overhead #1 - Welcome
	Review Field Level Risk Assessment Mental Process	<ul style="list-style-type: none"> • Introduce the exercise by saying that we are going to practice doing Field Level Risk Assessment using another case study. This will also give us the opportunity to test what we have already learned. We will also be learning more about kinds of hazards and types of controls 	Review content of previous sessions. Use for all formats	
		<ul style="list-style-type: none"> • Ask, “ What is the first step in doing a Field Level Risk Assessment on the work site?” <i>The group may respond with either meet as a crew to have a discussion or stop and think. Both responses are correct and should be reinforced. One represents an understanding of the team process and the other the mental process.</i> 		Overhead #6 Field Level Risk Assessment (Optional)

Supervisor's Guide to Field Level Risk Assessment Part 2: Training Others

Time	Objective	Content	Method	Helps
		<ul style="list-style-type: none"> • Ask, “What is the next step?” <i>Identify the Hazards.</i> How do you identify the hazards? <i>Identify job steps and the hazards associated with each step.</i> 	<p>Discuss the steps of Field Level Risk Assessment</p>	
05 minutes	<p>Discuss the kinds of hazards that are possible on a work site.</p>	<ul style="list-style-type: none"> • Ask, “What kind of hazards should we be looking for? <i>Record group’s ideas on the flipchart.</i> • Compare their list with the list on the overhead. These include equipment, heights, trenches, heat, cold, electricity, explosions, fires, radioactivity, chemicals, noise, muscle strains, microbes, sharp objects, vibration, stress, and many more. Give specific examples from the work that you do. 	<p>Present and Discuss kinds of hazards</p>	<p>Overhead #19 Kinds of Hazards</p>
		<ul style="list-style-type: none"> • Ask, “What is the next step after we identify the hazards?” <i>We assess the risk.</i> • Ask, “How do we assess risk?” <i>The <u>seriousness</u> and the <u>likelihood</u> of each hazard has to be assessed. The Risk Assessment Tool can be used to determine the degree of <u>risk</u></i> • Ask, “Why is it important to identify the degree of risk for each hazard?” <i>We need to put controls in place for all hazards that represent a high or a medium level of risk.</i> 		

	<p>Discuss the types of controls that can be used to keep risk to an acceptable level.</p>	<ul style="list-style-type: none"> • “We are going to learn more about types of controls. Lets make a list of controls that we use on a regular basis” Record their ideas on the flipchart. • Present the material about types of controls using the overhead. <i>Provide examples of types of controls from the work that participants do. Use examples from the list. Emphasize the need to use the right controls for the level of risk. High risk hazards require very tight controls.</i> The types of controls include: <ul style="list-style-type: none"> • <u>Engineering controls</u>, such as substitution, elimination, guards, other process enclosures, automatic shutdown devices, and ventilation. • <u>Administrative controls</u>, such as permits and procedures, and work scheduling to minimize the number of workers exposed. • <u>Personal protective equipment</u> such as fall protection, ear plugs and safety goggles. 	<p>Present information on types of controls</p>	<p>Overhead #20 Types of Controls</p>
<p>10 minutes</p>	<p>Demonstrate ability to do Field Level Risk Assessment in a group using a case study.</p>	<ul style="list-style-type: none"> • Introduce the case study exercise by saying that it is now time to practice. • Read the case study. • Follow the steps just discussed. Make sure that you record the following information on a flipchart: <i>The job steps, the hazards associated with each step, the risk (using the Risk Assessment Matrix) and the controls for each hazard with a medium or high level of risk.</i> The answers for the #22 Practice Case Study are found in the “ How to Customize the Training section. 	<p>Do a Field Level Risk Assessment in a large group discussion</p>	<p>Overhead #21 Company Case #1 or #22 Practice Case Study #1 # 15 Risk Assessment Matrix Flipchart: The job steps, the hazards, the assessment of risk, the controls</p>

Supervisor's Guide to Field Level Risk Assessment Part 2: Training Others

25 minutes	Demonstrate ability to do Field Level Risk Assessment in a group using a case study.	<ul style="list-style-type: none"> • Ask, "What is the most difficult part of the doing Field Level Risk Assessment?" What went well?" <i>These questions allow you to check how individuals are feeling about doing Field Level Risk Assessment. It will also help you to identify areas where more coaching may be needed.</i> 	Large group discussion about the exercise	
30 minutes	END this section	<ul style="list-style-type: none"> • Encourage workers do a field level risk assessment at least once before the next session 	Use only with the four session format	

Lesson Plan #4 – Responsibilities

Objectives:

1. Discuss the responsibilities they have to use Field Level Risk Assessment.
2. Describe how Field Level Risk Assessment will be used in this company.
3. Discuss the barriers to using Field Level Risk Assessment habitually and the supports that are available to overcome these barriers.
4. List the benefits of making Field Level Risk Assessment a habit on every job.
5. Demonstrate ability to do Field Level Risk Assessment in a group using a case study. (optional)

Time	Objective	Content	Method	Helps
00 minutes	Welcome	<ul style="list-style-type: none"> • Welcome participants to the course. Invite everyone to get refreshments (beverage and doughnuts) 	Use only in the four session format	Overhead #1 Welcome
	Review key points from last lesson	<ul style="list-style-type: none"> • Ask, “Did anyone try to do a Field Level Risk Assessment since last session? Could you tell us about it? How was it to do? What went well? What was difficult?” <i>Facilitate the discussion if there is a positive response to this question. If there is not a positive response review key concepts from last lesson i.e. types of controls, kinds of hazards.</i> 	Use only in the four session format	

Time	Objective	Content	Method	Helps
5 minutes	Discuss the responsibilities they have to use Field Level Risk Assessment.	<ul style="list-style-type: none"> • Present the responsibilities outlined in the Occupational Health and Safety Act. Explain that <u>everyone on the site is responsible</u> for occupational health and safety. • Alberta's Occupational Health and Safety Act tells who's responsible for what in work site health and safety. The Act says that workers have 3 specific responsibilities. They are: <ul style="list-style-type: none"> • Do every thing they reasonably can to protect their own and other workers' health and safety on the job. • Cooperate with their employer's efforts to protect their own and other workers' health and safety on the job. • Refuse to do unsafe work. • Ask, "How does Field Level Risk Assessment help workers to fulfill these legal responsibilities?" <i>Answers should include everyone is thinking about hazards, assessing the risk and putting controls. This makes sure that everyone is working safely. Since the company is doing this and making it a part of the health and safety program they are acting on their responsibility to make sure that people are working safely. Crew discussions are part of this.</i> 	Presentation about responsibilities outlined in the Health and Safety Act	Overhead #23 Health and Safety Responsibilities

Time	Objective	Content	Method	Helps
10 minutes	<p>Describe how Field Level Risk Assessment will be used in this company. (This section can be replaced with a case study.)</p>	<ul style="list-style-type: none"> • Ask, “Why do you think our company is implementing Field Level Risk Assessment? <i>Response could include their legal responsibilities, to lower injuries, save equipment costs, improve how we work etc.)</i> • Present information about the company’s Field Level Risk Assessment initiative. Answer the following questions : <ul style="list-style-type: none"> • What is the company trying to achieve by using Field Level Risk Assessment? • Have targets been set for improvements? If so what are they? • How important is reaching these targets to the company? <i>(Record the points you are going to present below.)</i> • How does management see Field Level Risk Assessment fitting with the current safety program? <i>(Record the points you are going to present below.)</i> 	<p>Present information about the company’s Field Level Risk Assessment Initiative</p>	<p>Overhead <i>Develop the overheads that you need to present the company information. Record the numbers and titles here. (see Overhead #28)</i></p>

Time	Objective	Content	Method	Helps
		<ul style="list-style-type: none"> • What are the expectations of supervisors? e.g. Will filling in forms be required? Submit suggestions for work improvements? <i>(Record the points you are going to present below.)</i> • What are the expectations of workers? Make suggestions for work improvements? <i>(Record the points you are going to present below.)</i> • What standards about Field Level Risk Assessment been set? If yes, what are they? e.g. How completely should the form be filled out? How often should form be submitted and to whom? How will these be monitored? <i>(Record the points you are going to present below.)</i> 	<p>Present information about the company's Field Level Risk Assessment Initiative</p>	<p>Overhead <i>Develop the overheads that you need to present the company information. Record the numbers and titles here.</i></p>

Time	Objective	Content	Method	Helps
		<ul style="list-style-type: none"> Will questions be asked about Field Level Risk Assessment be asked during safety audits? Formal performance reviews? <i>(Record the points you are going to present below.)</i> 	<p>Present information about the company's Field Level Risk Assessment Initiative</p>	<p>Overhead <i>Develop the overheads that you need to present the company information. Record the numbers and titles here.</i></p>
10 minutes	<p>Demonstrate ability to do Field Level Risk Assessment in a group using a case study. (optional)</p>	<ul style="list-style-type: none"> If time permits or there is little to say about the company's initiative, direct the participants to do a case study in teams of three. Use a case study that you have developed (Company Case #2) or the Practice Case #2 that has been provided. <i>Note: This is practice of the "Team Part" of the process. You will need to prepare another company case study using work that is familiar to your participants. See "How to Customize Training" for how this is to be done</i> 	<p>Direct Group to do a Case study (optional)</p>	<p>Overhead #24 Company case #2 or #25 Practice Case Study #2</p>
		<ul style="list-style-type: none"> Each team needs to: <ul style="list-style-type: none"> Identify the tasks to be performed Identify the hazards associated with each task, Assess the risk associated with each hazard Identify appropriate controls for each high and medium risk 		
		<ul style="list-style-type: none"> Direct the teams to record their ideas to each of the four points. You may choose to give each group a hard copy of the overhead, blank paper, or a copy of the Field Level Risk Assessment Form for this purpose. 		

Time	Objective	Content	Method	Helps
		<ul style="list-style-type: none"> • Check their work either in a large group discussion by asking the following questions: <ul style="list-style-type: none"> • What tasks need to be performed? • What are the hazards associated with each task? • What is the risk associated with each hazard? • What controls did you put in place?” <p><i>Stress that they are only doing “day of the job” conditions, not an entire safe work plan. You must have developed the “right” answers as part of your preparation.</i></p>	<p>Case study exercise</p>	<p>See case study answers that follow the lesson plans</p>
20 minutes	<p>Discuss the barriers to using Field Level Risk Assessment habitually and the supports that are available to overcome these barriers.</p>	<ul style="list-style-type: none"> • Ask, “What will stop the company and you from being successful at using Field Level Risk assessment? <i>Ensure that the discussion brings out ideas like – time to do assessment and have discussions, the habits we have of just working without thinking about hazards first, the cost of better controls, lack of knowledge about controls and risks, concern about speaking out to make suggestions, stop work etc. Record the barriers on the flipchart.</i> • Ask, “What support do you need to do Field Level Risk Assessment on a habitual basis? <i>Responses may include : to know that the company is serious, that I won’t get into trouble if I stop work, that making suggestions is worth the effort, other crew members to do it too, having the supervisor remind me to do it, have the supervisor hold the discussions, more practice do it etc. Record the ideas on a flipchart.</i> 	<p>Lead a discussion about barriers to using Field Level Risk Assessment and the supports that are available.</p>	<p>Flipchart Barriers, Supports</p>

Time	Objective	Content	Method	Helps
		<ul style="list-style-type: none"> • Ask, “ How will you get what you need to do this?. <i>Responses should include: Ask supervisors, other crew members, exerting my own effort etc. Emphasize what the company will do to help. Also emphasize the need for personal effort and commitment.</i> 	<p>Lead a discussion</p>	
25 minutes	<p>List the benefits of using Field Level Risk Assessment habitually</p>	<ul style="list-style-type: none"> • Ask, “What are the benefits of doing Field Level Risk Assessment for you? For the Company? Record the ideas on the flipchart. • Present the benefits of using Field Level Risk Assessment using the overhead. The same points are in the Worker’s Guide to Field Level Risk Assessment. Emphasize the need to use this process on a habitual basis. • Encourage participants to continue to develop the skills required to achieve these benefits. 	<p>Discuss and present information about the benefits of Field Level Risk Assessment</p>	<p>Overhead #26 Benefits (Workers) #27 Benefits (Company)</p>
30 minutes	<p>END</p>			

#1

WELCOME TO:

***FIELD LEVEL RISK
ASSESSMENT
WORKSHOP***

#2

“Moving Used Building Materials” Case

A crew of two was engaged in laying an electrical cable in the yard of a large industrial building under renovation. The first step of the safe work plan called for the removal of some used building materials that had been piled where the trench needed to be dug.

The crew identified the need to wear good gloves and coveralls to protect them from broken glass and other sharp edges. After they had been working for some time and the pile was almost all loaded on the flatbed, the supervisor arrived on site. He examined the material on the flatbed and identified a quantity of material that appeared to be asbestos, in the refuse that had been loaded.

#3

“Removal of a Heat Exchanger Tube” Case”

A heat exchanger tube was being removed from a heat exchanger in refinery area. A crane operator and two riggers are on the crew.

The lift was in a fairly tight area. There was a variety of equipment close to the heat exchanger.

The crew reviewed the safe work plan that had identified the following hazards: lack of communications, rigging pinch points, objects in the swing path, and visibility.

#3b

The crew had decided to use radio communication rather than hand signals because of the visibility problem.

They planned the swing path and checked the weight calculations carefully. They used the required method to restrict area access on three sides of the heat exchanger. The fourth side appeared to have no possibility of traffic.

Everything proceeded as planned until a maintenance worker entered the lift area through the unsigned area. He had come to do a regular equipment check. His sudden appearance momentarily distracted the operator and the crane came in contact with an adjacent piece of equipment causing serious damage.

“Removal of a Rope Sling” Case

A crew was unloading cable from a picker truck flatbed. There were two people doing the job as was required in the job plan for a heavy lift. The plan had included careful positioning of both workers. All had gone according to the plan.

Another worker on site noticed that the two were having some difficulty removing the two and a half-inch wire rope sling from the crane hook and came to assist them.

While working together, the rope sling struck the third worker. This worker was injured seriously, having a broken nose, and cuts to his lower lip requiring 8 stitches.

Field Level Risk Assessment is:

- *A simple process carried out every day, by every crew and every worker, on every job.*
- *A way of identifying hazards, assessing risk and controlling risk.*

Field Level Risk Assessment:

- *Does not replace other safe work planning*
- *Adds information about “day of the job” hazards*
- *Is done every time something changes.*
- *Involves identifying each step of the job, the hazards associated with each step, how likely and serious the risk is, and how the risk can be controlled.*

The Team Part

- *Done by the crew and the foreman*
- *Done on the day of the job, before the job begins and when conditions or plans change*
- *Crew does the same process (thinking/ mental) individuals do, together*
- *Documented*

#8

Field Level Risk Assessment Form

FIELD LEVEL RISK ASSESSMENT			
DATE: _____		PROJECT NAME: _____	
LOCATION: _____		COMPANY: _____	
STEP 1 – IDENTIFY MAIN JOB TASKS	STEP 2 – IDENTIFY HAZARDS	STEP 3 – ASSESS RISK (RISK = CONSEQUENCE X PROBABILITY)	
STEP 4 – CONTROL RISKS			
HAZARD	WHAT CONTROL	BY WHOM	WHO CHECKED
FOLLOW-UP REQUIRED			
COMPLETED BY: _____		SUP/LEADER REVIEW: _____	

#9

The Individual Part

- *Stop and Think (A mental process)*
- *Identify job steps*
- *Identify hazards*
- *Assess risks*
- *Control risks*

#10

Identifying Hazards

- *Identify the steps of a job*
- *Identify the hazards associated with each step*

#11

‘Fluorescent Lamp’ Case

You are to change a fluorescent lamp in an overhead light fixture. The light fixture is located in a busy and poorly lit hallway.

#12

“ Identify Hazards” Questions

- *Do I clearly understand my job for the day?*
- *Am I physically & mentally prepared to do each task?*
- *What could go wrong?*
- *Is there a danger to myself or others?*
- *What could change and create a new hazard?*
- *Could other crews, workers, or conditions pose hazards to me?*

#13

Hazards for Replacing a Fluorescent Lamp

- *Working at elevation*
- *Dust disturbance (eyes and breathing)*
- *Electrical hazard*
- *Breaking glass (bulb and fixture cover)*
- *Other workers or traffic below*
- *Eye / muscle strain from poor lighting*

#14

“Assessing Risk” Questions

- *How serious could this be?*
- *How likely is it to happen?*

#15

Risk Assessment Matrix

RISK = CONSEQUENCES X PROBABILITIES

Consequences: *High – Serious; Medium – Moderate; Low – Minor*

Probability: *High – Often; Medium – Sometimes; Low – Rarely*

PROBABILITY

		High	Med.	Low
High	H	H	M	
Med.	H	M	L	
Low	M	L	L	

#16

Assessing Risk in Replacing a Fluorescent Lamp

<i>Hazard</i>	<i>Consequence</i>	<i>Probability</i>	<i>Risk</i>
Falls from elevation			
Dust inhalation or in eyes			
Electrical Shock			
Cuts from broken glass			
Traffic bumping ladder			
Eye and muscle strain			

#17

Assessing Risk in Replacing a Fluorescent Lamp

<i>Hazard</i>	<i>Consequence</i>	<i>Probability</i>	<i>Risk</i>
Falls from elevation	Serious (H)	Sometimes (M)	High
Dust inhalation or in eyes	Minor (L)	Often (H)	Medium
Electrical Shock	Serious (H)	Rarely (L)	Medium
Cuts from broken glass	Moderate (M)	Sometimes (M)	Medium
Traffic bumping ladder	Serious (H)	Sometimes (M)	High
Eye and muscle strain	Moderate (M)	Often (H)	High

#18

“Controlling Risk” Questions

- *Are permits, written practice procedures, etc. required?*
- *What can I do to control the hazard?*
- *Will the control affect another part of the task being done?*
- *Do I need to tell anyone?*
- *Is there someone I could call for help?*
- *Are emergency response plans needed?*

#19

Kinds of Hazards

Chemicals

Heights

*Slips, trips &
falls*

*Cold
temperatures*

Lighting

Stress

Electricity

Microbes

Trenches

Equipment

*Muscle
strains*

Vibration

Explosions

Noise

Fires

Radioactivity and many more

*Hot
temperatures*

*Sharp
objects*

Types of Controls

- ***Engineering:***

substitution, elimination, guards, other process enclosures, automatic shutdown devices, ventilation, communication devices, etc.

- ***Administrative:***

Permits, procedures, work scheduling, training and education, etc.

- ***Personal protection:***

fall protection, ear plugs and safety goggles, etc.

#21

Company Case Study #1

(Insert your own company's case here)

#22

Practice Case Study #1

You are part of a two-person crew whose job it is to sort and shelve a variety of excess job materials in a cold storage area. The top shelf is three meters above the floor. Some of the items are bulky. Some are heavy.

Occupational Health & Safety Act

Workers must:

- 1. Protect their own & other workers' health & safety on the job.*
- 2. Cooperate with their employers for the protection of their own & other workers' health & safety on the job.*
- 3. Refuse unsafe work*

#24

Company Case Study #2

(Insert your own Company's Case here)

#25

Practice Case #2

You are part of a two-man crew (a driver and a swamper). You are unloading a 40' x 12' lunch trailer (30,000 lbs.) off a flatdeck/lowboy in a congested and snowy work area. The Swamper is a new employee and inexperienced.

#26

Benefits of Field Level Risk Assessment

For Workers:

- ***Fewer Injuries***
- ***More Security for their families***
- ***Chance to make improvements on the job***
- ***Recognition for contribution to the company***

#27

Benefits of Field Level Risk Assessment

For the Company:

- *Improved productivity*
- *Cost savings*
- *Reduced WCB costs*
- *Better data to improve safety*
- *Less “down time*
- *Improved morale*
- *Due diligence*

#28

Our Company's Plan for Field Level Risk Assessment

(Insert overheads that you have developed to support your explanation of your company's implementation of Field Level Risk Assessment)

HOW TO CUSTOMIZE THE TRAINING

The following information provides suggestions about how to customize the Field Level Risk Assessment Workshop so that it effectively meets your company's needs.

Company Logos etc.

All material in this series can be printed to carry your company logo, name, etc. rather than the Construction Owner's Association of Alberta.

Company Specific Information and Language

Information

Lesson Plan #4 of the training suggests the presentation of information about your company's Field Level Risk Assessment initiative and how it fits with current health and safety practices in current use. The steps to take to do this are as follows:

1. Review the questions about Company Specific Plans. They are found in Lesson Plan #4 and in "How to Prepare for Delivering the Training". You may have additional questions as well that have to do with your company's current health and safety programs.
2. Determine who is the best person to answer your questions and schedule time with them.
3. Ask what they would like to have communicated to workers about the company Field Level Risk Assessment Initiative.
4. Take notes of the meeting.
5. Review the lesson plan. Determine if the questions included in the lesson will help you to explain your company's plan for Field Level Risk Assessment. If so, add the information you will deliver in the spaces following the questions. If they are not helpful, change the questions and record the content you plan to deliver.
6. An alternative case study exercise has been provided if there is no useful content to deliver. If you use this alternate exercise, adjust the time frames to reflect your revised plan.
7. If you do not understand the questions, you may wish to review the Manager's Handbook.
8. Develop overheads to summarize the key points you want to communicate.

Language

You may wish to change words etc throughout the Lesson Plans, Overheads, or the Worker's Guide to Field Level Risk Assessment etc. to reflect the language used in your company.

Company Specific Examples

In both Lesson Plan # 3 and # 4 there are opportunities to use company specific case studies. Using situations that are familiar to those attending the training is the best way for them to develop practical skills. Writing these case studies is not difficult. The job you choose to use for the case study should:

- Have no more than six major steps.
- Should include day or site specific conditions that could create hazards.
- Be familiar to those attending the workshop.

The job can be one for which a safe work plan is usual. It can also be one for which there are no written plans or procedures. The focus of this process is site specific, day of the job conditions. In the real world if there is not safe work plan or established procedures, all of the hazards would need to be identified and recorded. For the purposes of the training, choose a common job that is not too complex.

Use the format below to structure the information.

1. Short description of the job
2. A list of the job steps
3. A list of the hazards associated with the job steps
4. An assessment of risks using the Risk Assessment Matrix
5. The controls that would be used to reduce the risk

Answers to Practice Case Studies

Case Study #1

You are part of a two-person crew whose job it is to sort and shelve a variety of excess job materials in a cold storage area. The top shelf is three meters above the floor. Some of the items are bulky. Some are heavy.

Job Steps

- Select correct ladder (length, integrity, proper feet)
- Sort articles to be lifted according to size and weight
- Determine lifting method
- Set ladder
- Lift items to shelves

Hazards

Traffic in area of work space

Slippery floor causing ladder to slip

Lifting items to top shelf – muscle strain, dropping causing injury and breakage

Risk Assessment

Traffic : low consequence X high probability = medium risk

Slippery floor: medium consequence X medium probability = medium risk

Lifting items: high consequence X high probability = high risk

Controls

Traffic: Barricades

Slippery floor: Proper feet on ladder, tie off rope at top of ladder

Lifting: Use proper methods: assess each item lifting only those that can be lifted safely by one person, heavy or bulky items on the bottom shelf

Case Study #2

You are part of a two-man crew, a driver and a swamper. You are unloading a 40' x 12' lunch trailer (30,000 lbs.) off a flatdeck/lowboy in a congested and snowy work area. Swamper is a new employee.

Job Steps

- Isolate area
- Level surface
- Back-in truck and trailer
- Offload trailer
- “Shake-off” the trailer
- Leave area

Hazards

- People coming in area
- Visibility issues
- Swamper inexperienced – needs instruction
- Pinch points
- Slip hazards

Risk Assessment

People coming into work area:	high consequence X high probability = high risk
Visibility issues	medium consequence X medium probability = medium risk
Swamper inexperienced:	high consequence X high probability = high risk
Pinch points:	high consequence X medium probability = high risk
Slip hazards:	low consequence X high probability = medium risk

Controls

Barricades
More people to act as spotters
Swamper education in signals
Communication – radio/ signals
Spread sand / grade

TIPS ON HOW TO DELIVER THE TRAINING

ADULT LEARNING

Adults learn when:

1. Learning solves a problem or meets a need.

To learn people must be aware of what there is to learn i.e. how to do something a better way. It is helpful to have someone help them identify the gap between what they could be doing and what they are doing. Knowing the consequences of this gap also motivates this learning. The case studies in Lesson 1 are designed to help the workers see problems that can occur when workers do not do Field Level Risk Assessment.

2. The learning environment is comfortable/enjoyable.

The physical situation needs to be comfortable both physically and psychologically. It is important that a trainer treats each person in the workshop with respect and concern. Since learning new skills may mean making mistakes, learning it is often stressful. If you show that you are willing to learn and make mistakes there is less pressure on workshop participants. An atmosphere of cooperation rather than competition with others in the group also improves the learning environment.

3. The learner participates in the planning of the learning.

When learners help to decide what is to be learned, and how it is to be learned, motivation increases. The lesson plans provide many opportunities for workers to give input and ideas. Their comments will help to dictate what is learned in the workshop.

4. Learners are active and are able to use their current and past experience.

People learn best by doing and being involved in the learning. When the learning connects with experiences that they have had, the new learning is reinforced. Discussion and case studies provide learners with the opportunities for activity and the use of past experience. Encourage comments from participants that use real experiences. Use your own examples and experience.

5. Learners can see progress /success in their learning.

Learners must experience success in learning. This is easier when the measurements of progress are clear, they have the resources and coaching that they need and they receive feedback from others. Frequently give workshop participants positive comments about “right” answers, useful comments and insightful questions.

Presenting Information

1. Keep the presentation **short**. No more than 5 minutes without interaction.
2. Give **the purpose** of your lecture clear. You should be able to say your purpose in a nut shell..
3. Develop a clear, **logical structure** for your lecture. Decide on your main points and in what order you will present them.
4. Use well-developed and relevant **examples**, illustrations and personal experience to help your group visualize what you are talking about.
5. **Reinforce** by repeating key ideas at least three times.
6. **Use visual aids** to summarize, clarify or illuminate your ideas.
7. Use **humour** if possible.
8. Use questions and answers/ examples from the group during the presentation. The more **interaction** that the group has with what you are saying, the more they will remember.
9. Reinforce what you are saying with effective **body language**, gestures, movement, positions, eye contact and facial expressions.
10. Avoid **jargon**. Make sure everyone understands the words you are using.
11. Speak from an **outline** and, if possible, without notes. Your visuals or handouts can provide the outline.
12. Make your **conclusion** strong. It can be a summary, answer to a problem or a challenge.
13. Follow the lecture with **exercises that reinforce** the learning.

Discussion

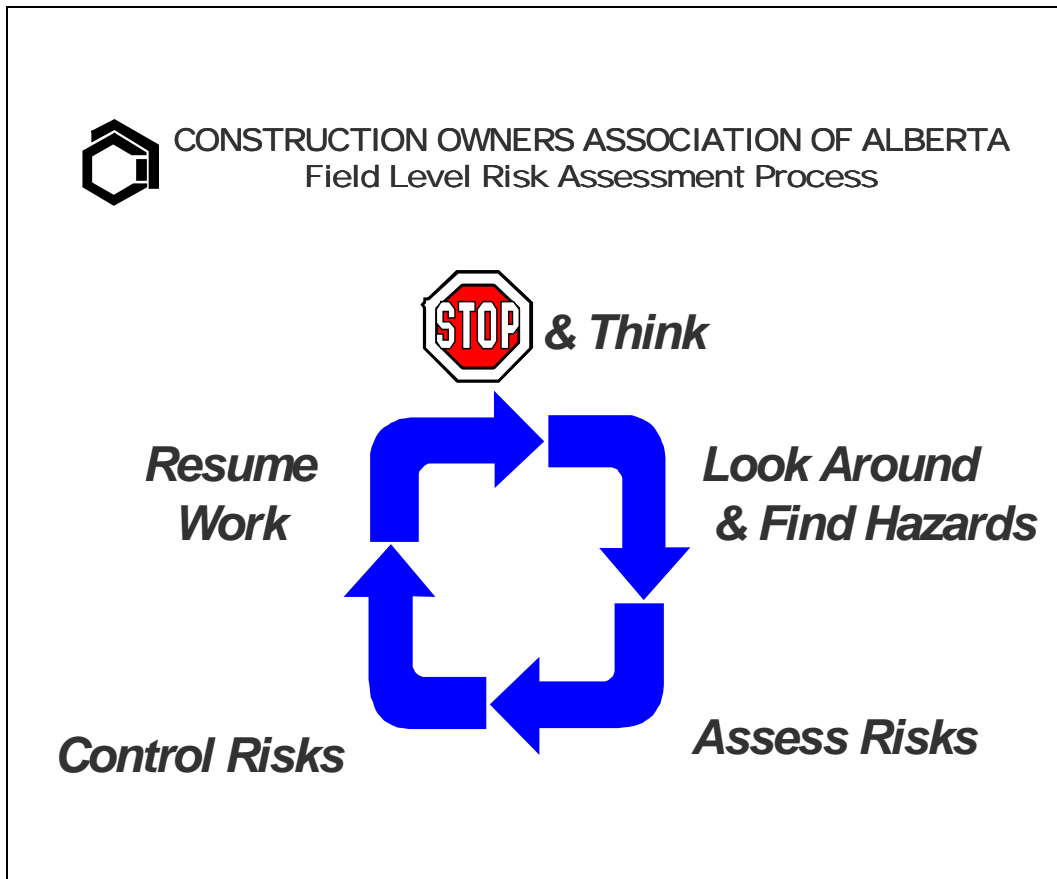
1. Use discussions to teach key ideas and to **get people to think**.
2. Use a discussion after an **exercise** to make sure that people learned what you wanted them to learn.
3. Determine the **objective** of the discussion. Do you want to reinforce key points, get feedback, or challenge current thinking? What will be learned?
4. **Plan questions** that will help you achieve the discussion's objective.
5. Choose the **style** of questions, direct or open-ended. Direct questions are "right answer" questions. They check what people know. Open-ended questions allow for many answers. They often start with how, why, what do you think etc. They help you find out what people understand, think or feel about an issue or idea.
6. **Rephrase** the learners' **answers** or ask more questions that use what they have said.
7. **Be flexible** about using different questions than you have planned. Use what the group is saying to ask more questions that will teach what you need to teach.
8. **Summarize** the discussion and **connect** the summary with the next learning activity. There should be a logical and continuous flow between presentations, discussions and exercises.

TEMPLATES

THE “MEMORY JOGGER” – A CARD FOR WORKERS

The “Memory Jogger” is a pocket-sized card to give as a reminder of how to conduct “Field Level Risk Assessment. Your company can customize this card.

(SIDE ONE)



“MEMORY JOGGER CARD” SIDE TWO



FIELD LEVEL RISK ASSESSMENT

Questions to ask before & while doing a task:

IDENTIFY:

- ✓ Do I clearly understand my task?
- ✓ Am I physically & mentally prepared to do the task?
- ✓ What could go wrong?
- ✓ Is there a risk to others or myself?
- ✓ What can change that could create a new risk?
- ✓ Could other crews, workers, or conditions pose risks to me?

ASSESS:

- ✓ How bad could this be?
- ✓ How likely is it to happen?

CONTROL:

- ✓ Who should I contact for help?
- ✓ Are permits, written practices, procedures, etc. required?
- ✓ What can I do to control the risk?
- ✓ Will the control affect another part of the task being done?
- ✓ Do I need to tell anyone else?
- ✓ Are emergency response plans required?

**“IF IN DOUBT SHOUT”
CONTACT YOUR SUPERVISOR!**

RISK ASSESSMENT MATRIX

**LEVEL OF RISK = Consequences
X Probability**

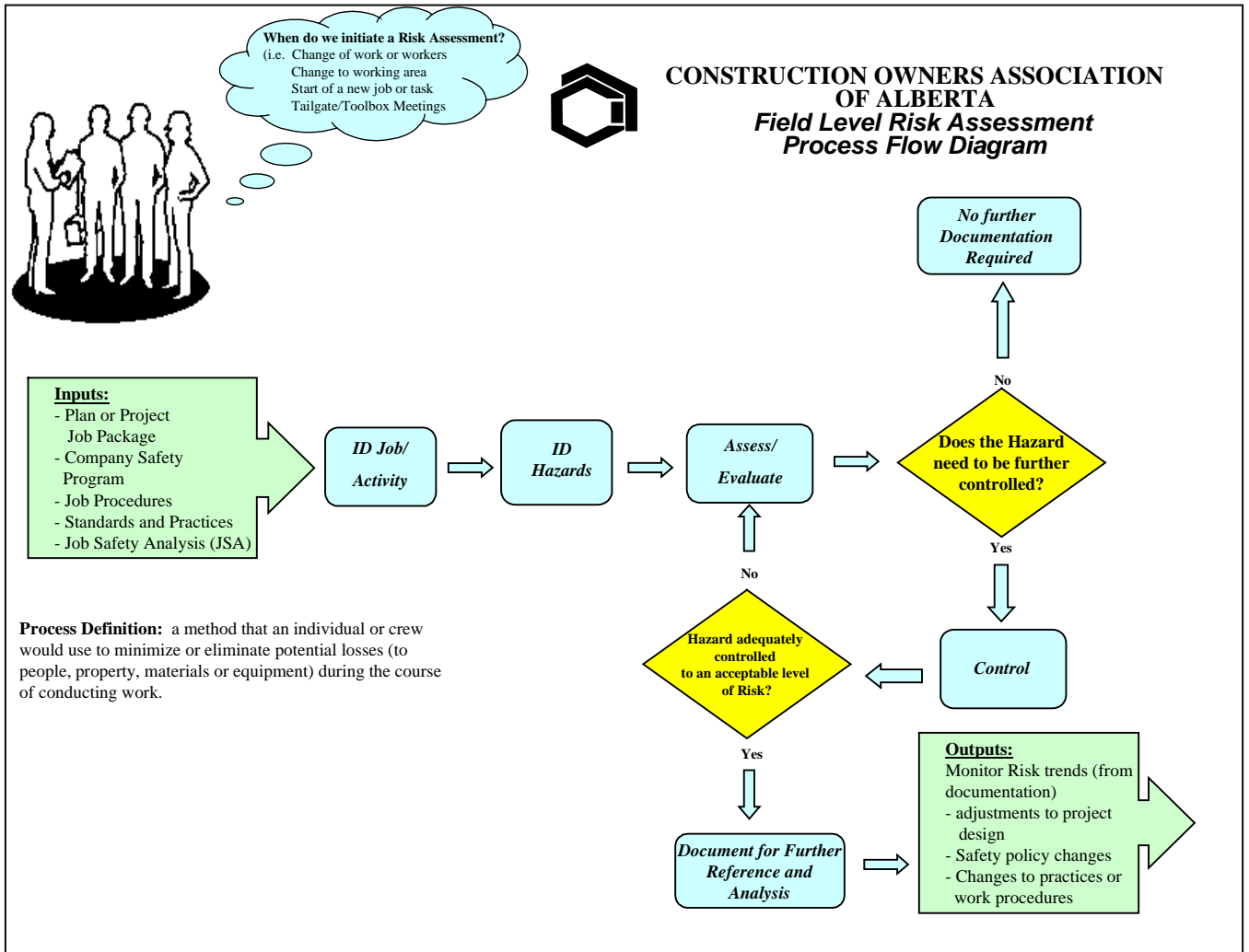
Consequences: High (H)– Serious; Medium (M) – Moderate; Low (L) – Minor
Probability: High (H)– Often; Medium (M)– Sometimes; Low (L) – Rarely

PROBABILITY

	High	Med.	Low
High	H	H	M
Med.	H	M	L
Low	M	L	L

CONSEQUENCES

FIELD LEVEL RISK ASSESSMENT PROCESS FLOWCHART



FIELD LEVEL RISK ASSESSMENT FORM

FIELD LEVEL RISK ASSESSMENT			
DATE: _____		PROJECT NAME: _____	
LOCATION: _____		COMPANY: _____	
STEP 1 – IDENTIFY MAIN JOB TASKS	STEP 2 – IDENTIFY HAZARDS	STEP 3 – ASSESS RISK (RISK = PROBABILITY X CONSEQUENCE)	
STEP 4 – CONTROL HAZARDS			
HAZARD	WHAT CONTROL	BY WHOM	WHO CHECKED
FOLLOW-UP REQUIRED			
COMPLETED BY: _____		SUP/LEADER REVIEW: _____	

WORKER'S GUIDE
TO
FIELD LEVEL
RISK
ASSESSMENT

Written by Esther Hudson (Capability Connections) and Deborah Smith (DSA) for
Construction Owners Association of Alberta, 1998

This is a “free use” document and can be used or customized without the approval or
consent of the authors or the Construction Owners Association of Alberta.

INTRODUCTION

This guide is designed to be used by workers during the delivery of the training program in Field Level Risk Assessment. It can be used in its current form or customized to include company specific information. This guide can be reformatted and produced as a pocket-sized guidebook for reference after the training.

The Problem

Some Facts

Construction workers have the highest rate of injury accidents of any industry in Alberta.

Many accidents are prevented when workers, like you, identify possible hazards, assess risks and take action to minimize the risks before doing work.

It is your legal responsibility to work safely. It is management's responsibility to ensure worker safety.

Contents

This booklet provides information about how Field Level Risk Assessment can help you to work more safely.

1. The Responsibility to Work Safely
2. What Field Level Risk Assessment Is
3. When and How to do Field Level Risk Assessment
4. The Steps in Field Level Risk Assessment
 - Identify Hazards
 - Assess Risk
 - Control Risk
5. Benefits of Field Level Risk Assessment
6. Summary: Field Level Risk Assessment Flow Chart



The Occupational Health and Safety Act

Employer Responsibilities

Employers are responsible to ensure the health and safety of every worker on a work site. Employers are also responsible to make sure that you, as a worker, understand your health and safety responsibilities.

Worker Responsibilities

You are responsible for taking reasonable care to protect your health and safety and the health and safety of other workers around you on the work site. You are also responsible to cooperate with your employer's health and safety efforts.

Conclusion

Safety is everyone's responsibility. Both employers and workers have responsibilities under health and safety law. Field Level Risk Assessment is one way that both workers and employers can take action on these responsibilities.

What is Field Level Risk Assessment?

A Part of Your Company's Safety Program

There are many ways of improving work site safety. Many companies build safety into their work plans using a variety of methods. These methods include Job Safety Analysis, Hazop, Failure Modes and Effect Analysis, written job specific procedures, etc. These methods are used before construction begins. Field Level Risk Assessment is used at the work site, during construction. It builds on the information from the other methods by adding information about conditions at the actual time and location of the construction.

An Assessment of Risks at the Job Site

Crews and individual workers do Field Level Risk Assessment immediately before doing work on site. As a worker doing Field Level Risk Assessment, you use the information that you have been given about the work and add information from the work site that day. You are expected to think about each job step and identify possible hazards given the current conditions. You are expected to assess risk in relation to each job step and identify ways of controlling the risk.

A Team Discussion and Individual Mental Process

Your supervisor leads a discussion about the job hazards and records your crew's assessment and plans. You also do your own risk assessment as you work. Before taking any action, you stop and think, identify the hazards, assess the risks and put in place controls to minimize or eliminate the risk.

When Do You Do Field Level Risk Assessment?

As a worker and a crew member you do Field Level Risk Assessment:

- At the beginning of a new job or a new shift
- When new workers come on site
- When the work changes (e.g. plans are modified, substitute equipment is provided, etc.)
- Whenever work site conditions change (e.g. weather, availability of tools etc.)
- Whenever you change work tasks or equipment
- Whenever a change in another person's activity on the work site could pose a risk to you

How Do You Do Field Level Risk Assessment?

Whether you are doing a Field Level Risk Assessment as a discussion with your crew or as a mental activity while you are working, the steps are the same. For **each job step** you:

1. STOP and Think
2. Look Around and Find Hazards
3. Assess Risks
4. Control Risks
5. Resume Work



The Steps of Field Level Risk Assessment

The “Steps of Field Level Risk Assessment” will help you think through your work effectively. Asking questions at each step of the assessment will focus your thinking. Each question raises an important issue to consider.

Identify

In this step you **Stop, Think** and **Identify Hazards** in the work that you are doing.

1. Do I clearly **understand** the steps to this job?
 - What exact job will I do, and what specific steps does it involve?
2. Am I physically and mentally **prepared to do each job step**?
 - Am I strong enough to do each of the steps involved in this job?
 - Do I know how to do each step safely?
3. What **could go wrong**?
 - What could upset my plan for each step?
4. Is there a **danger** to others or myself? (any potential danger is a hazard)
 - To equipment?
 - To the environment?
 - Examples: weights, heights, trenches, heat, cold, electricity, explosions, fires, radioactivity, chemicals (liquid, vapour), noise, muscle strains, microbes, sharp objects, vibrations, stress, equipment etc.
5. What could **change** and create a new hazard?
 - What could interfere with how I have planned to do the job safely?
6. Could **other crews, workers, or conditions** pose hazards to me?
 - Will others go through the same mental process and control their hazards?
 - Will their work cause a hazard to me?

Assess Risks

1. How **serious** could this be?
 - What could go wrong as a result of the hazards?
 - Could it cause someone to break a bone, be injured? Cause death?
 - Slow down work? Cause damage to equipment?
 - Contaminate the soil or the air?
2. How **likely** is it to happen?
 - Is it almost certain to happen? Likely to happen? Not very likely? Almost impossible?

The following “**RISK ASSESSMENT MATRIX**” will help you assess the level of risk. The “seriousness” is called the consequences. The “likelihood” is called the probability.

LEVEL OF RISK = Consequences X Probability

Consequences: High (H)– Serious; **Medium (M)** – Moderate; **Low (L)** – Minor
Probability: High (H)– Often; **Medium (M)**– Sometimes; **Low (L)** – Rarely

Find the code for the consequences along the left side and the code for the probability along top of the Risk Assessment Tool. Draw a mental line across the diagram from the consequences code and down the diagram from the probability code. The point where they meet is the code for the assessment of the risk for the particular hazard. The outcome of the risk assessment will help to determine the most appropriate kind of control to use. **All HIGH and MEDIUM risks must have controls.**

		PROBABILITY		
		High	Med.	Low
CONSEQUENCES	High	H	H	M
	Med.	H	M	L
	Low	M	L	L

Control Risks

1. Are **permits**, written practices, procedures, or work scheduling to reduce number of workers required? i.e. administrative controls
 - Take immediate steps to do this.

2. What can I **do to control** the hazard?
 - Do I know all the required steps in the procedure, code of practice, permit, job plan etc.?
 - Do I know how to control this hazard?
 - Are there other controls that I think are needed? e.g. personal protective equipment (fall protection, ear plugs, safety goggles etc.), process controls (guards, automatic shutdown devices, enclosures, ventilation)

3. Will the controls **affect any other part** of the job being done?
 - Does the control introduce a new hazard? (e.g. exhaust from a heater when it is cold)

4. Do I need to **tell anyone** else?
 - Is there anyone else who could be affected by these controls?
 - Is there a need to coordinate the work being done by more than one person?

5. Are **emergency plans** needed?
 - If the identified hazard has a high risk emergency procedures may be needed.

6. Is there someone that I could **call for help**?
 - Who has the knowledge and skill to help me?

Benefits of Field Level Risk Assessment

For Workers:

- Reduced probability of injuries
- More security for their families
- Improved morale
- Opportunity to make work place improvements
- Opportunity for recognition of increased contribution to the company
- Improved ability to think critically

For Companies:

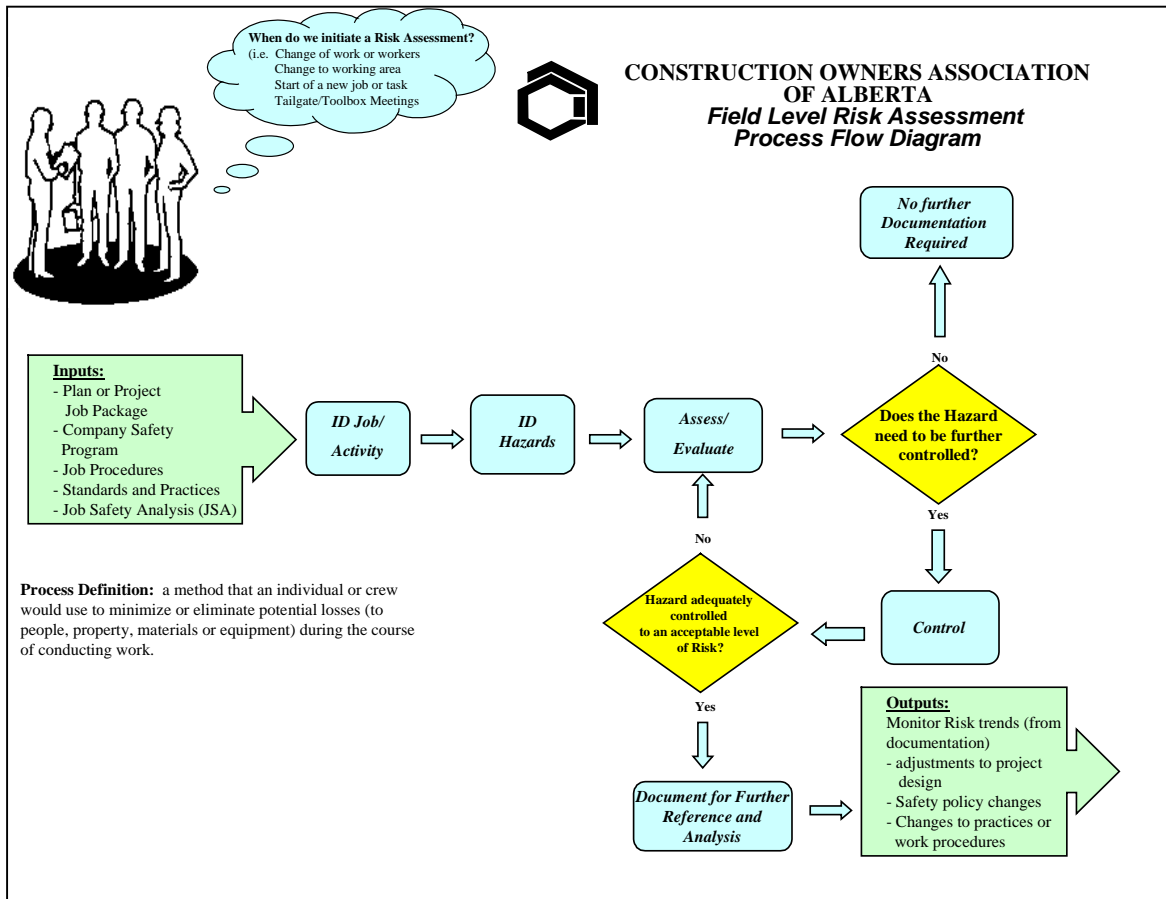
- Improved work methods and productivity
- Direct cost savings
- WCB premium reduction
- Decreased costs to pass on to customers. A competitive edge.
- Better data to improve company safety
- Reduction in the “emotional” costs of accident and injury
- Increased trust and confidence of workers
- Due diligence

Summary: Field Level Risk Assessment

The following diagram summarizes the Field Level Risk Assessment process.

Supervisors use **INPUTS** like the project plan, the company safety program, job procedures, and job safety analysis to ensure worker health and safety. They use immediate information about the actual work location to prepare for a discussion.

Supervisors lead a discussion with crews to **IDENTIFY** the job steps and **IDENTIFY HAZARDS** associated with **each job step**. Together the supervisor and workers **ASSESS the RISKS** of those hazards using the **Risk Assessment Matrix**. They **IDENTIFY CONTROLS** to lower the risk to an acceptable level.



For those risks that are not adequately controlled, further control measures are used. Supervisors **RECORD** the discussion to provide workers with instructions about hazards and how to control them. The record is also used to identify effective ways to improve the way work is done and to increase safety.

Field Level Risk Assessment is done every time conditions, workers or plans change. Workers conduct Field Level Risk Assessment as a **mental process** as they do work. Crews do it as a **team activity** with the supervisor.

Using Field Level Risk Assessment is an effective way for workers and employers to reduce accidents and injury to people and property and to improve how work is done on a daily basis.



**CONSTRUCTION OWNERS ASSOCIATION
OF ALBERTA**
Field Level Risk Assessment

OBJECTIVE OF THE IMPLEMENTATION PLAN

The attached “Suggested Implementation Plan” is a template one could use to implement Field Level Risk Assessment in your own company. It is important to understand that this Suggested Implementation Plan is only a template and you may need to tailor the plan for implementation to meet the needs of your company.

The success of any program depends on the support, commitment and participation of management, supervisors and workers.

This implementation plan is provided to:

- Assist companies in the effective implementation of FLRA.
- Ensure links between implementation plans in various companies are consistent
- Provide employer companies with a sequential plan on how to implement FLRA and ensure its continued benefit in your company
- Provide employer companies with some “thought starters” on how to effectively implement and manage FLRA in their business



**CONSTRUCTION OWNERS ASSOCIATION
OF ALBERTA**
Field Level Risk Assessment

SUGGESTED IMPLEMENTATION PLAN
FOR FLRA IN YOUR COMPANY

Phase 1: Commitment

- a) Provide introduction of FLRA to Management
- b) Management/Leadership Commitment to FLRA Implementation
 - Identify the benefits for workers and for the company
 - Identify the costs associated to training and planning the implementation
 - Identify who needs to be training
- c) Management must establish the level of expectation for the program with in their company
 - Write FLRA into the company Safety Policy
 - Add FLRA to the company safety program
 - Prepare a Standard for FLRA usage in your company
- d) Management must establish the level of expectation for the program and its usage by contractors and sub-contractors on their jobsites
 - Write FLRA requirements into the contracting process
 - Establish the FLRA requirements in the bidding documentation
- e) Management letter of commitment and introduction of FLRA to all workers, contractors and sub-contractors

Phase 2: Plan

- a) Management to establish an Implementation planning team for your company (could be one person or it could be several dependant on the size of the company and extent of the time commitment required to get the program implemented)
- b) Establish the guidelines and set the standards for FLRA usage.
- c) Organize and set up schedules for training of all supervisors and workers
- d) Build FLRA into the appropriate place within your Safety Program and/or Company Policy
- e) Review FLRA Guideline, Process, Cards and Forms, etc and adapt to your company.
 - Decide if documentation (forms) will be required?
 - If documentation is required,
 - Determine what level of risk will be documented (i.e. only medium and high level risks)?
 - Determine what form will we use (COAA form or our own, or a new creation)?
 - Customise the Risk Matrix to suit your company
 - Develop Risk Matrix instructions on the forms or in the training

- f) Write FLRA requirements into the bid documentation for contractors, if necessary and notify contractors and sub-contractors in writing.
- g) Identify administration process/responsibilities
 - Will we need a database to capture data from forms?
 - Who will maintain filing/database?
 - Who will analyse data for trends?
 - How will trends be communicated?
- h) Determine how to sell this in your Company? Develop a Promotion Plan.
- i) Identify potential challenges in the implementation, develop plans to address challenges (i.e. risk assessment of the plan)
- j) Identify methods to communicate successes of FLRA (i.e. after training is completed, trends identified in the documentation submitted, changes to the safety programs, etc)

Phase 3 Do

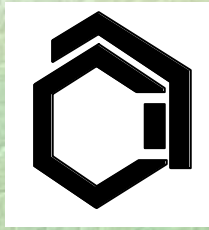
- a) Train the Trainer(s)
- b) Train the Supervisors/Foremen (classroom and field training)
- c) Train the Workers (tell them, show them, let them use, provide guidance)
- d) Attendance acknowledgement (sign-in sheet)
- e) Provide ongoing Coaching and guidance by supervisors to workers
- f) Monitor that workers are using FLRA
- g) Supervisors/foremen are role-models (workers will do as they do)
- h) Celebrate Success
 - Award system for using FLRA
 - Incentive Program

Phase 4: Check

- a) Perform regular assessments of the use of FLRA
- b) Measure whether FLRA are being completed
 - review of FLRA documentation
 - Audits
 - visual inspection of the worksite
 - review of tailgate/toolbox meeting notes

Phase 5: Act

- a) Celebrate Success
- b) Review, revise and communicate changes to your company's FLRA usage and standards
- c) Evergreen Suggestions - Forward to COAA Safety Committee
- d) Identify changes required from trend analysis of Risks being reported.
 - Safe Work Practices being updated
 - Additions to the Safety Program



**CONSTRUCTION OWNERS ASSOCIATION
OF ALBERTA**

Field Level

Risk Assessment

Note: this package was originally developed to present
Field Level Risk Assessment to the
May 13th/'98 Best Practices Workshop in Edmonton.



Oops!

Field Level Risk Assessment

Agenda for Today

- **Introduction**
- **History**
- **Risk Assessment Types**
- **Field Level Risk Assessment Process & Tools**
- **Exercise - Implementation & Training**
- **Next Steps**
- **Questions & Answers**

Field Level Risk Assessment

Objectives:

You will understand:

- value of Field Level Risk Assessment
 - why it is required
 - what's in it for the worker
 - what's in it for the Company
- the Models & Processes COAA is making available
- where you can obtain support in introducing Models and Processes into your companies.

Field Level Risk Assessment

COAA Support Contacts

- Steve Proulx - ACSA
- Graham Wilson - Alberta Power
- Ian Sinclair - Brown and Root
- Dave Hagen - Chemco Electric
- Bob Montgomery - Colt Engineering
- Rod LeRoux - Delta Catalytic
- Warren Whitfield - Flint Canada
- Sharlene Wilson - Nova Gas Transmission
- Joe Semeniuk - Semeniuk & Semeniuk Inc.
- Brian Bishop - Syncrude
- Greg McCaughey - Inland Group
- Roger Ellenberger - PetroCanada

Field Level Risk Assessment

History

- Industry injury rates increasing
- Causes relating to “failure to recognize hazards”
- COAA desire to reduce human suffering of our workers
- COAA Board of Directors - recognized a need for improvement
- COAA Safety Committee - Include in Committee objectives
- Sub-group developed from volunteers of the Safety Committee

Field Level Risk Assessment

Focus Statement

Develop a practical and common risk assessment process which enables Workers to recognize, assess and control risks to people, property, materials and the environment

Practical: a process that is available, feasible and useful in everyday application by workers in a field environment.

Common: a process that is applicable to any worker and is used on a regular basis

Worker: a person engaged in any occupation, including trades-persons, laborers, crew chiefs, foreman and owner company designated site representatives.

Enable: to supply the workers with the means to be able to do

Field Level Risk Assessment

Risk Assessment Types



Field Level Risk Assessment

What FLRA is?

A method that an individual or crew would use to minimize or eliminate potential losses (to people, property, materials or the environment) the day of the job.

Field Level Risk Assessment

Our Focus



Field Level Risk Assessment (Start of Shift or Start of new Job)

- Prior to work commencing
- Documentation
- Daily (Foreman & Crew)



Personal Risk Assessment (Focused on Workers)

- Mental Process
- Workers while carrying out work tasks



When do we initiate a Risk Assessment?
 (i.e. Change of work or workers
 Change to working area
 Start of a new job or task
 Tailgate/Toolbox Meetings)



**CONSTRUCTION OWNERS ASSOCIATION
 OF ALBERTA**
*Field Level Risk Assessment
 Process Flow Diagram*

- Inputs:
- Plan or Project Job Package
 - Company Safety Program
 - Job Procedures
 - Standards & Practices
 - Job Safety Analysis (JSA)

**ID Job/
Activity**

ID Hazards

**Assess/
Evaluate**

**Does the Hazard
need to be further
controlled?**

**No further
Documentation
Required**

No

Yes

Control

**Hazard adequately
controlled
to an acceptable level
of Risk?**

No

Yes

**Document for Further
Reference and
Analysis**

- Outputs:
- Monitor Risk trends (from documentation)
 - adjustments to project design
 - Safety policy changes
 - Changes to practices or work procedures

Process Definition: a method that an individual or crew would use to minimize or eliminate potential losses (to people, property, materials or equipment) during the course of conducting work.

Revised: 1998.04.21

Field Level Risk Assessment

To Document or Not to Document?

- COAA recommends documentation
 - due diligence
 - safety audits
 - safety program improvements
- Companies must decide what works best for them!
Based on:
 - current safety program
 - size of company
 - risk level of activity, etc



CONSTRUCTION OWNERS ASSOCIATION OF ALBERTA
Field Level Risk Assessment Process



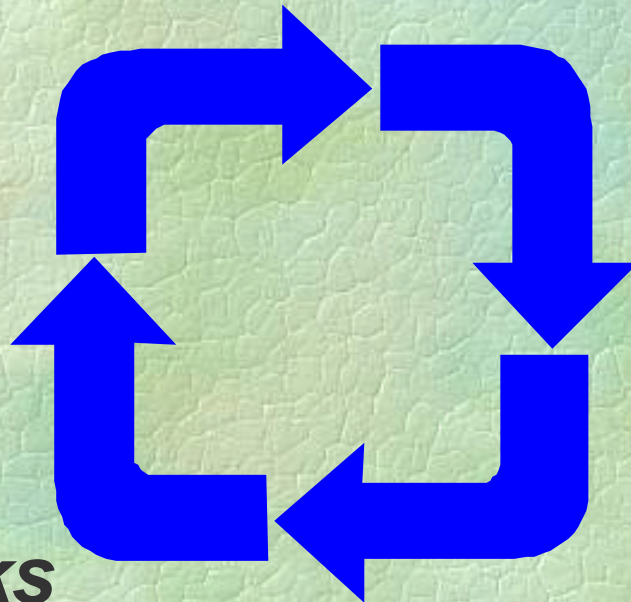
& Think

***Resume
Work***

***Look Around
& Identify Hazards***

Control Risks

Assess Risks





FIELD LEVEL RISK ASSESSMENT

Questions to ask before & while doing a task:

IDENTIFY:

- ✓ Do I clearly understand my task?
- ✓ Am I physically & mentally prepared to do the task?
- ✓ What could go wrong?
- ✓ Is there a risk to others or myself?
- ✓ What can change that could create a new risk?
- ✓ Could other crews, workers, or conditions pose risks to me?

ASSESS:

- ✓ How bad could this be?
- ✓ How likely is it to happen?

CONTROL:

- ✓ Who should I contact for help?
- ✓ Are permits, written practices, procedures, etc. required?
- ✓ What can I do to control the risk?
- ✓ Will the control affect another part of the task being done?
- ✓ Do I need to tell anyone else?
- ✓ Are emergency response plans required?

**“IF IN DOUBT SHOUT”
CONTACT YOUR SUPERVISOR!**

Field Level Risk Assessment

Benefits

- For the Workers:
 - lower probability of injuries
 - more security for worker's family
 - improved morale
 - recognition that all risks can't be engineered out
- For the Company:
 - due diligence
 - cost savings - less injuries
 - WCB premium reduction
 - productivity efficiencies
 - data used to improve company safety



Field Level Risk Assessment

FLRA Training and Implementation

- Take 5 minutes individually to jot down your ideas on training and implementation using the forms supplied.
- Spend 10 minutes discussing with the group at your table and document the common key points
- Be prepared to have a spokesperson share the common key points

Field Level Risk Assessment

Next Steps for the FLRA Team?

- Consolidate feedback from the Best Practices Workshop
- Develop Training Tools with ACSA
- Develop a suggested Implementation Plan
- FLRA Marketing Plan
- Develop an Evergreen Process for continuous improvement

Field Level Risk Assessment

Conclusion

- COAA encourages FLRA use in the industry
- COAA Website
- Additional Information from Team Members

THANK-YOU FOR YOUR PARTICIPATION



When do we initiate a Risk Assessment?
(i.e. Change of work or workers
Change to working area
Start of a new job or task
Tailgate/Toolbox Meetings)



CONSTRUCTION OWNERS ASSOCIATION OF ALBERTA

Field Level Risk Assessment Process Flow Diagram

- Inputs:**
- Plan or Project Job Package
 - Company Safety Program
 - Job Procedures
 - Standards and Practices
 - Job Safety Analysis (JSA)

*ID Job/
Activity*

*ID
Hazards*

*Assess/
Evaluate*

**Does the Hazard
need to be further
controlled?**

*No further
Documentation
Required*

No

Yes

Control

No

**Hazard adequately
controlled
to an acceptable level
of Risk?**

Yes

*Document for Further
Reference and
Analysis*

- Outputs:**
- Monitor Risk trends (from documentation)
 - adjustments to project design
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 - Changes to practices or work procedures

Process Definition: a method that an individual or crew would use to minimize or eliminate potential losses (to people, property, materials or equipment) during the course of conducting work.

FIELD LEVEL RISK ASSESSMENT

DATE:

PROJECT NAME:

LOCATION:

COMPANY:

STEP 1 – IDENTIFY MAIN JOB TASKS	STEP 2 – IDENTIFY HAZARDS	STEP 3 – ASSESS RISK <small>(RISK = PROBABILITY X CONSEQUENCE)</small>

STEP 4 – CONTROL HAZARDS			
HAZARD	WHAT CONTROL	BY WHOM	WHO CHECKED

<p>FOLLOWUP REQUIRED</p>

ISSUED BY:

SUP/LEADER REVIEW:

STEP 1. IDENTIFY MAIN JOB TASKS

STEP 2. IDENTIFY HAZARDS

STEP 3. ASSESS RISK (RISK = PROBABILITY X CONSEQUENCES)

PROBABILITIES

		H	M	L
C O N S E Q U E N C E S	H	H	H	M
	M	H	M	L
	L	M	L	L

PROBABILITY
H. OFTEN
M. SOMETIMES
L. RARELY

CONSEQUENCE
H. SERIOUS
M. MODERATE
L. MINOR

HOW TO ASSESS RISK TOOL:

- a) Ask yourself “how probable” is this hazard to result in loss to people, property, material and environment, if left uncontrolled.
- b) Ask yourself if this uncontrolled hazard was to result in a loss, “how severe would the consequence be”
- c) Locate your answer to probability and consequence questions on the 3 x 3 chart (i.e. high, medium, low)
- d) Put in place the controls appropriate for the level of risk
- e) Complete documentation

STEP 4. CONTROL(S)

STEP 5. DOCUMENT

STEP 6. GO TO WORK



CONSTRUCTION OWNERS ASSOCIATION OF ALBERTA

Evergreen Plan

BACKGROUND:

A sub-committee of the COAA Safety Committee has developed tools for conducting Field Level Risk Assessments. These tools were introduced at the May 13 1998 Best Practices Workshop held in Edmonton. Training materials are available to assist companies implement the use of these tools.

It is anticipated that actual use of these tools will reveal areas where they can be improved or enhanced. This evergreen process is proposed to ensure that opportunities to improve the Field Level Risk Assessment tools are not lost. The Field Level Risk Assessment Process must be as practical and efficient as possible, if workers are expected to find value in it.

Everyone is encouraged to contact the COAA office with their suggested improvements.

PLAN:

The evergreen process is really a cyclic continuous improvement process.

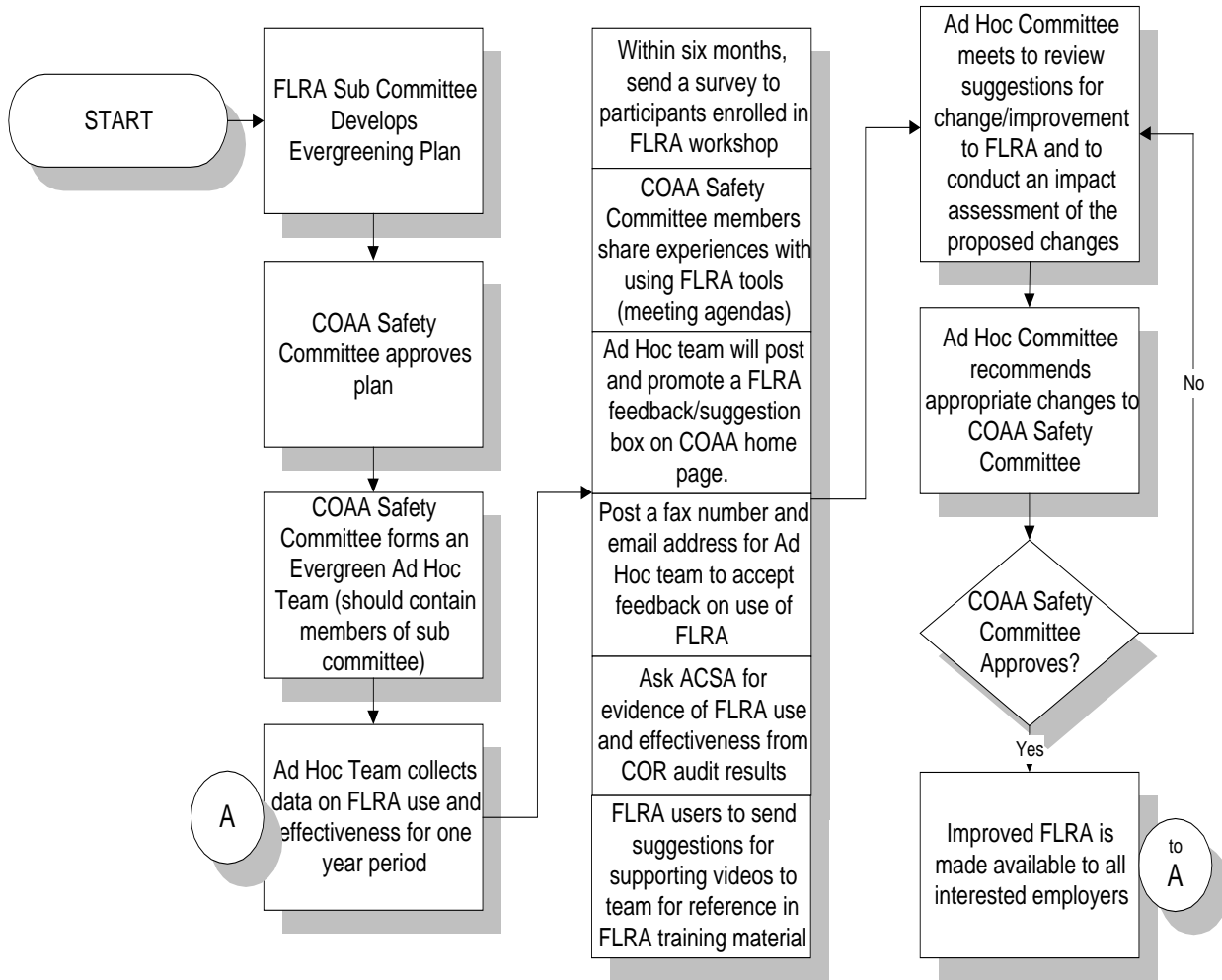
An Ad Hoc team from the COAA Safety Committee will manage the process and provide periodic progress reports.

PROCESS:

The evergreen process is shown schematically on the following page.



CONSTRUCTION OWNERS ASSOCIATION OF ALBERTA



COAA Field Level Risk Assessment (FLRA) Evergreen Process

FIELD LEVEL RISK ASSESSMENT

SAMPLE CARD

The following two pages provide the *artwork* with which you can use to create the front and back sides of the Construction Association of Alberta *sample* Field Level Risk Card.

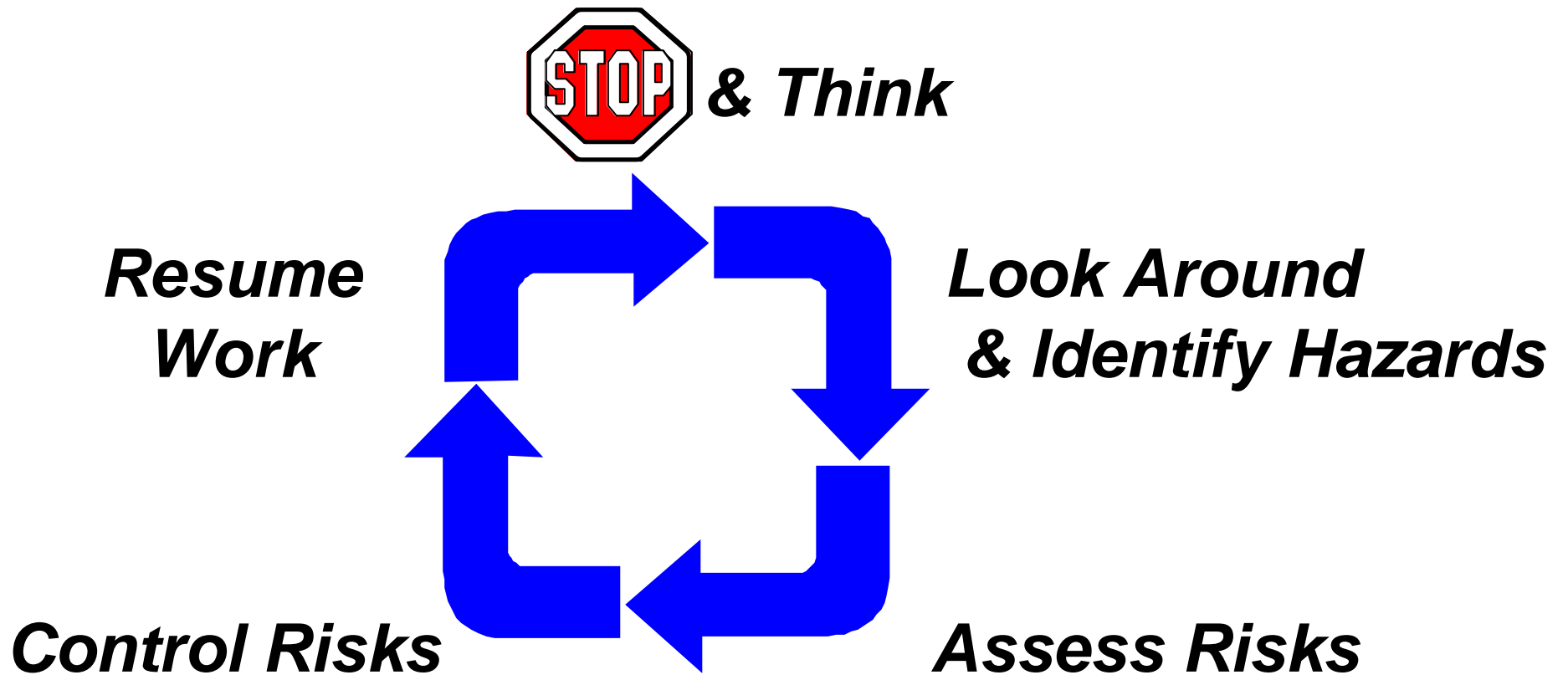
It is intended that you will modify this artwork to meet the needs of your company. Typically companies replace the COAA logo with their company's logo, rephrase the text on the back side of the Card to suit their business, and add their own company safety slogans, etc.

These materials can also be modified to develop other promotional materials to support the implementation of the Field Level Risk Assessment in your company.

NOTE: *This is a PowerPoint (Version 4) file.*



CONSTRUCTION OWNERS ASSOCIATION OF ALBERTA
Field Level Risk Assessment Process





FIELD LEVEL RISK ASSESSMENT

Questions to ask before & while doing a task:

IDENTIFY:

- ✓ **Do I clearly understand my task?**
- ✓ **Am I physically & mentally prepared to do the task?**
- ✓ **What could go wrong?**
- ✓ **Is there a risk to others or myself?**
- ✓ **What can change that could create a new risk?**
- ✓ **Could other crews, workers, or conditions pose risks to me?**

ASSESS:

- ✓ **How bad could this be?**
- ✓ **How likely is it to happen?**

CONTROL:

- ✓ **Who should I contact for help?**
- ✓ **Are permits, written practices, procedures, etc. required?**
- ✓ **What can I do to control the risk?**
- ✓ **Will the control affect another part of the task being done?**
- ✓ **Do I need to tell anyone else?**
- ✓ **Are emergency response plans required?**

**“IF IN DOUBT SHOUT”
CONTACT YOUR SUPERVISOR!**



CONSTRUCTION OWNERS ASSOCIATION OF ALBERTA
Best Practice for
Field Level Risk Assessment

CONTACT LIST

The following people are members of C.O.A.A.'s Field Level Risk Assessment Development and Implementation Subgroup. If you have questions about any aspect of Field Level Risk Assessment, contact one of these people:

<u>Name:</u>	<u>Company:</u>	<u>Phone:</u>	<u>FAX:</u>	<u>email:</u>
Steve Proulx	Alberta Construction Safety Association	453 3311	455 1120	acsa@compusmart.ab.ca
Rod LeRoux	Delta Catalytic Industrial Services	258 6895	258 6875	
Sharlene Wilson	TransCanada Pipeline	290 7451	290 5909	sharlene.wilson@pipe.nova.ca
Graham Wilson	Alberta Power Ltd.	420 7033	420 4193	grahamw@hr.apl.cul.ca
Joe Semeniuk	Semeniuk & Semeniuk Inc.	424 2121	424 4888	joe@mrg.sas.ab.ca
Warren Whitfield	Flint Engineering	263 6910	265 4737	
Ian Sinclair	Brown & Root	468 1341	469 0827	
Dave Hagen	Chemco	436 9570	434 0811	Chemco@caisnet.com
Hal Middlemiss	PCL	430 3539	437 3671	jhmiddlemiss@pcl.ca
Greg McCaughey	Inland Group	255 1131	420 2597	
Brian Bishop	Syncrude Canada Ltd.	790 4555	790 4401	bishop.brian@syncrude.com

**FLRA Story
For COAA distribution
By Kerry McArthur
November 12, 1998**

Title Suggestions:
**- Eliminating Loss Potential on
Construction Sites**
- How to Avoid the Oops Factor
**- Identify, Assess, Control --
Dealing with Hazards**
**- COAA Deals with Day-of-the-Job
Hazards**

These days, just about every large Alberta construction firm has its own custom-built safety program, complete with intensive training workshops and materials for everyone from on-site construction workers to top-level executives.

But what about other construction companies that may not have had the time or resources to develop comparable safety processes? Should these businesses simply copy the programs of larger firms?

Or should they ‘wing it’ and just try to use common sense in the workplace?

The Construction Owners Association of Alberta (COAA) has a quick — and very affordable — answer to these questions:

Use *their* new process for identifying hazards and managing risks on the worksite.

“The Field Level Risk Assessment (FLRA) process was recently developed to provide Alberta (and Alberta-contracted) construction firms with a thorough, practical process to manage hazards and risks on the job site. A process supervisors and workers can use right on the job site to manage the risks of their work and to make the jobsite a safer place to work,” says Sharlene Wilson, member of the COAA safety committee and a health and safety program coordinator for TransCanada Pipelines' Energy Transmission Division (formerly NOVA Gas Transmission Ltd.).

“What’s more, **the program is free of charge** to COAA members or anyone else who wants to adopt it. We’re convinced FLRA will make an enormous difference to site safety, not just for those in construction but for people working in other industries as well.

The COAA Safety Committee launched its new initiative earlier this year after hearing a disturbing message in a presentation on injury and fatality trends being seen in the construction industry. Don Currie, Managing Director of COAA states: "Alberta is in the midst on some of the best growth years the industry has seen in some time. As the amount of construction work continues to grow so does the need for experienced and skilled workers. However, more and more we are seeing younger and less experienced workers entering our workforce. The frequency of injuries to workers who have worked with a construction employer for less than six months are on the rise."

“And the number of construction-related deaths investigated over the past two years bears this out: from January 1 to June 19 in 1997, three fatalities were recorded compared to nine fatalities for the same period in 1998. One of our key objectives in the COAA Safety Committee is to work to improve safety performance in the Construction Industry by identifying, developing and promoting within the COAA , consistent and common safety and health practices and models."

Recognizing that a comprehensive safety program is important for every construction operator in Alberta, how’s a frantically busy manager supposed to carry it through — especially when his workers are busy onsite?

SAFETY — IN SIMPLE STEPS

“The real beauty lies in the simplicity of the Field Level Risk Assessment's three basic steps:

- IDENTIFY the hazards
- ASSESS the risks
- CONTROL the risks”

answers Brian Bishop, leader of the COAA FLRA team and Senior Loss Management Advisor at Syncrude Canada Ltd. “This program relies on two common sense, easy to learn processes. The first process involves the Supervisor, with the crew examining the plan of work. They will discuss the tasks involved in performing the job, the current working conditions, operating environment changes, etc. Together they will discuss and identify the hazards that exist in doing the work under the conditions present that day; assess the seriousness and the probability of each hazard; and determine the appropriate actions required to control each hazard.

The second process is a mental process which the individual worker will use to examine all aspects of the work at the beginning of , and throughout the job, to identify hazards, assess the risks, and control the risks.”

"Imagine the reduction in injuries and incidents we could expect if all workers used the mental process all the time!"

The first process Bishop described is supported by a simple form that assists the supervisor and workers through a series of risk-assessment steps. “They’re asked first to identify the main job tasks, then to identify the hazards associated to that job task, and assess the risks associated with it. Lastly, they are asked to identify control methods which control the risk of the task to an acceptable level.”

The FLRA process makes a point of showing how risk assessment can be done on the spot — in the form of a simple

matrix. “The supervisor and worker discuss the seriousness of the consequences if the hazard resulted in a loss, and how likely the losses are to occur.

The next steps are to identify methods to control the risk, briefly document the proceedings — and go to work.”

The second FRLA process, or mental process is supported by a “memory jogger” card, a laminated wallet-sized card that reminds workers *how* to identify, assess and control the potential dangers around them.”

On one side of the card, a simple flow chart emphasizes five steps of the risk-assessment process: Stop and Think; Look around and identify Hazards; Assess Risks; Control Risks: and Resume Work.

On the other side, the card suggests a few questions for the worker to ask: “Do I clearly understand my task? Am I physically and mentally prepared to do the task? What could go wrong?” and asks the worker to assess the risks: “How bad could this be? How likely is this to happen?” Finally, the card notes, “Who should I contact for help? What can I do to control the risk? Are emergency response plans required?”

Bishop notes that a small amount of training is suggested. Recognizing this requirement, COAA, with the help of Capability Connections of Edmonton, has made available training tools which are comprised of:

- a Manager's information and Implementation Package
- a Supervisor's Self Study Course
- a two-hour Workers Training Course
- supporting training materials

INDUSTRY STANDARDS

The FLRA program is clearly a practical and time-saving way for companies to start up their own field level risk assessment program. It has been designated by COAA to be a best practice. The FLRA process was developed by amalgamating the 'best of the bunch' and rolling it all together in a best practice process."

Says Graham Wilson, another member of the COAA's safety committee and Manager of Corporate Health and Safety at Alberta Power, "FLRA is a superb hands-on risk assessment process which was developed by selecting the best features from numerous field level risk assessment and hazard recognition programs of leading construction and industry companies. The program is not just an 'industry-standard,' it's a best of industry-standard."

Wilson suggests that many larger corporations, with instituted safety programs, will want to adopt some of FLRA's initiatives. "We'll certainly encourage our membership to use it or add ideas from it to their own programs.

In fact Imperial Oil Resources is looking into the implementation of FLRA in their organization. As identified by Dave Fennel of Imperial "Incident analysis over the past several years has pointed toward a high number of direct causes for incidents as being 'failure to recognize a hazard'. We view the concept of FLRA and especially the pocket card (memory jogger card) as an excellent approach to addressing this recurring incident cause."

COAA has designated FLRA as one of its Best Practices, and will continue to develop it through its Evergreen Process. The fact that FLRA will be an 'evergreen' process is another of its strong advantages, he adds. "Our COAA committee monitors

safety practices across the construction industry on a regular basis. If one of our members wants to improve something, we will do that. New practices can always be applied to FLRA because we've designed the process to evolve with changing times and standards." Wilson says COAA, an Edmonton-based association, will issue an annual award for best safety practices to a member company, later adding other incentives to encourage management, supervisors and workers to adopt the Field Level Risk Assessment program.

Steve Proulx states that "the Alberta Construction Safety Association (ACSA) is committed to promoting FLRA. We will be looking to see that construction companies in Alberta are aware of FLRA as a best practice. "The Workers' Compensation Board in B.C. and Saskatchewan have also asked to examine FLRA, so we know it's starting to generate some real interest outside the province."

"Those of us who've worked hard to develop FLRA are convinced it will make a real difference, both to reduce losses associated with unmanaged hazards and to improve our industry's bottom line. If the program can save even a few hours of human suffering along the way, it will have been worth it."

Incorporated in 1973, the Construction Owners Association of Alberta promotes construction excellence by working effectively with the construction industry and other stakeholders to the benefit of its membership and Alberta. Its aim to improve the safety performance of the construction industry is one of its highest priorities as an industry association.

To learn more about FLRA, or to obtain program materials, please visit the COAA Website at:

e-mail: coaa@telusplanet.net

...or contact COAA at:

Construction Owners Association of Alberta

Suite 2302, Oxford Tower

10235 101 Street

Edmonton, Alberta T5J 3G1

Phone: (403) 420-1145

FAX: (403) 425-4623

FLRA Short Story
For COAA distribution
By Kerry McArthur
November 16, 1998

For those Alberta construction firms that may not have a **hazard recognition process** in place, the Construction Owners Association of Alberta (COAA) has a quick — and very affordable — solution.

The Field Level Risk Assessment (FLRA) process was recently developed to provide Alberta construction firms with a thorough, practical process to manage **day-of-the-job** hazards and risks on the job site. It's an industry-standard process both supervisors and workers can use at the site, with a minimum of training required.

And, best of all, the program is free of charge to any company or organization that wants to adopt it.

The beauty of FLRA lies in its simplicity. Three basic steps are involved:

- IDENTIFY the hazards
- ASSESS the risks
- CONTROL the risks

Together, supervisors and crew work through these three steps before each job. During the day, workers use the FLRA's 'memory jogger' card to keep these workplace risks top-of-mind.

The FLRA process was developed by selecting the best features from numerous field level risk assessment and hazard recognition programs of leading construction and industry companies. The COAA Safety Committee will continuously update the program to keep it current with changing times and standards in the Alberta construction industry.

To learn more about FLRA, or to obtain program materials,
please visit the COAA Website at:

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