

Behavior based safety – what does it to health and safety?

Roy Erling Furre

2. Deputy leader in SAFE

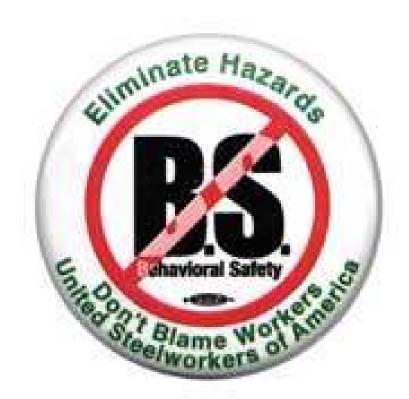
Norwegian union of energy workers

WWW.SAFE.NO

Slides are made by USWA and Roy E. Furre



What is behavior based safety



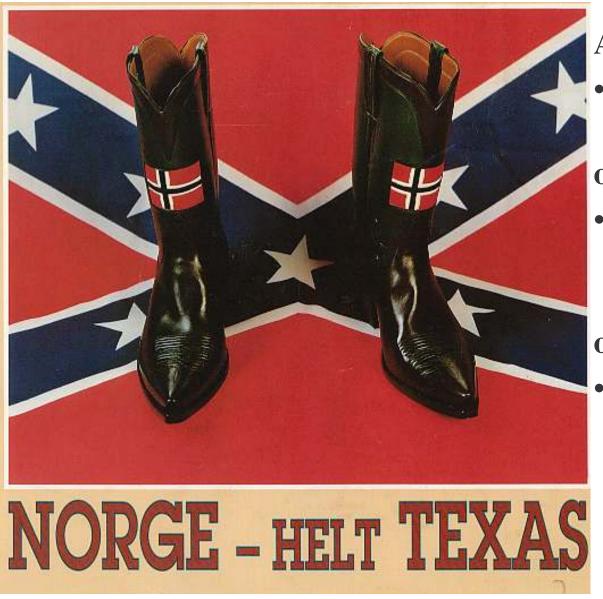
Unions all over the world are fighting against the behavior based safety programs.

USWA is one of the most important unions against BBS.

This is a typical slogan that you can find on mirrors all over the workplace



Symbolsafety can be imported from USA



Also known as:

Behavior Based Safety (BBS)

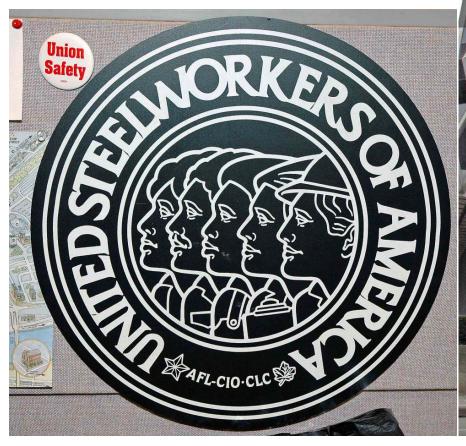
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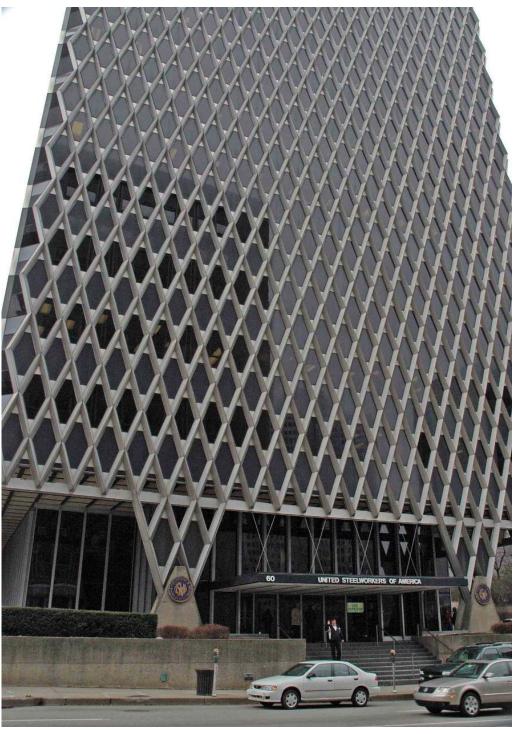
Fixing the workers, not the workplace

or

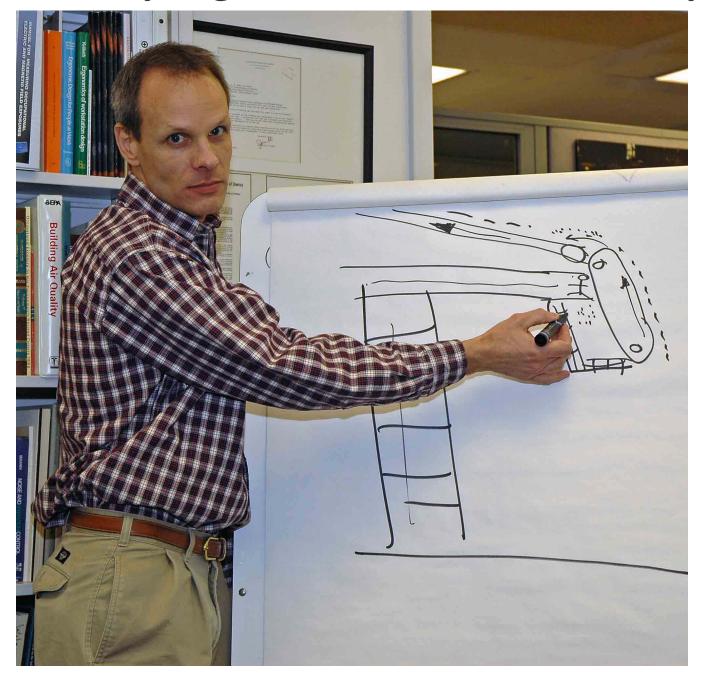
Blame the Workers Culture

Foto; Omslagsillustrasjon til boken Norge – Helt Texas 1992, ISBN 82-530-1556-9 The USWA headquarter in Pittsburg





Studying behavior based safety in America



Meeting with the HSE department in USWA



Studying behavior based safety in America



James Frederic have educated uinions all over the world about the dagars with bahaviot based safety.

He is the leader of the HSE departement in USWA

Educating union representatives against BBS in Washington



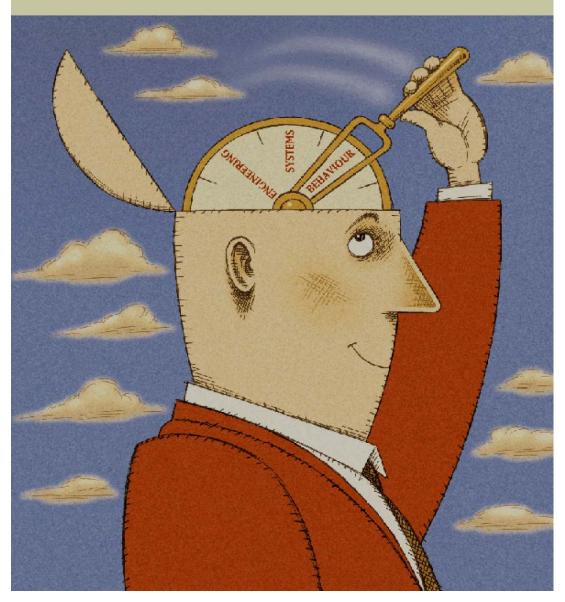
View from top of Empire State building in New York



Changing Minds



A practical guide for behavioural change in the oil and gas industry



The "Step Change" project in UK has a goal to change the behaviors

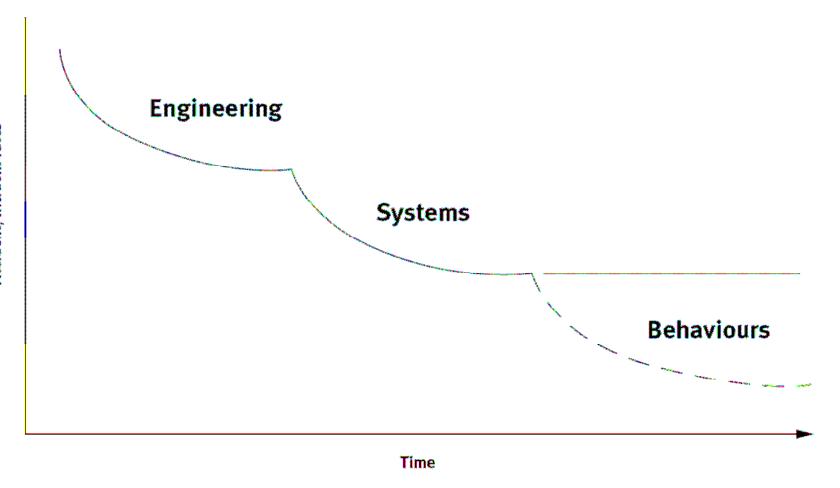


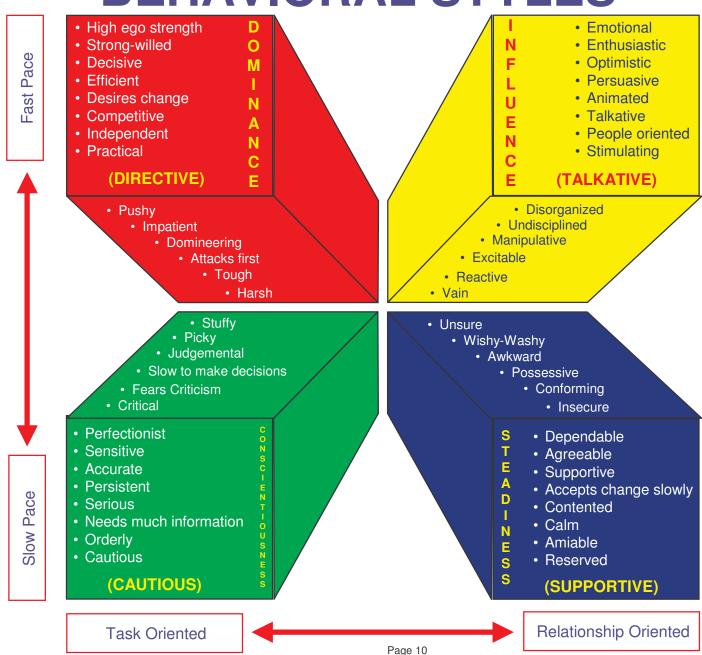
Figure 1: The impact of behaviour on safety



Color marking of oil workers – is it a joke, or a serious HSE program?



BEHAVIORAL STYLES



			I			I											
	lost ke	Least Like		Most Like	Least Like		Most Like	Least Like		Most Like	Least Like		Most Like	Least Like	M argument ^L		Least Like
enthusiastic		В	gentle	С	С	reserved	D	D	logical	D	D	disciplined		D	argument- ative	Α	Α
daring	Α	Α	persuasive	В	Е	obliging	С	С	bold	Α	Α	generous	С	С	systematic	D	D
diplomatic	D	D	humble	Е	D	strong-wille	ed A	Α	loyal	С	С	animated	В	В	cooperative		С
satisfied	С	С	original	Е	Α	cheerful	В	В	charming	В	В	persistent	Α	Α	light-hearte	ed B	В
Box 1			Box 6			Box 11			Box 16			Box 21			Box 25		
cautious	D	D	expressive	В	В	stimulating	В	В	sociable	В	В	impulsive	В	В	jovial	В	В
determined		A	conscientio		D	kind	С	С	patient		С	introverted	_	D	precise	D	D
																	_
	В	В	dominant	Α_	A	perceptive		D	self-relian		A	forceful	A	A	direct	Α	Α
good-nature	dC	E	responsive	Е	С	independer	nt A	Α	soft-spoke	n D	D	easy-going	j C	С	even- tempered	С	С
Box 2			Box 7			Box 12			Box 17			Box 22			Box 26		
friendly	В	Е	poised	В	В	competitive	. A	Α	willing	С	С	good mixe	r B	В	restless	Α	Α
accurate	D	D	observant	D	Е	considerate		С	eager		Е	refined	D	D	neighborly	С	С
outspoken	Α	Α	modest	С	С	joyful	В	В	thorough	D	D	vigorous	Α	Α	appealing	В	В
calm	Е	С	impatient	Α	Α	private	D	D	high-spirit	ed B	В	lenient	С	С	careful	D	D
Box 3			Box 8			Box 13			Box 18			Box 23			Box 27		
talkative	В	В	tactful	D	D	fussy	D	D									
	D	D	agreeable	С	С	obedient	С	С	aggressive		Α	captivating		В	respectful	D	D
controlled		D				obedient	C	C	extroverte	_	В	contented	С	С	pioneering	Α	Α
conventional	С	С	magnetic	В	В	firm	Α	Α	amiable	С	С	demanding	у А	Α	optimistic	В	В
decisive	Α	Α	insistent	Α	Α	playful	В	В	fearful	Е	D	compliant	D	D	helpful	С	С
Box 4			Box 9			Box 14			Box 19			Box 24			Box 28		
adventurous	Α	Α	brave	Α	Α	attractive	В	В	confident	В	В	MOS		LEAS		iffere	ence
insightful	D	D	inspiring	В	В	introspectiv	e D	Е	sympathe					A			\dashv
out-going	В	В	submissive	С	С	stubborn	Α	Α	impartial	Е				C			一
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Box 5			Box 10			Box 15			Box 20					E			
20/ 0			20/ 10			DOX 10			DOX 20				_				

PLATINUM RULE

Treat people as they need / want to be treated.

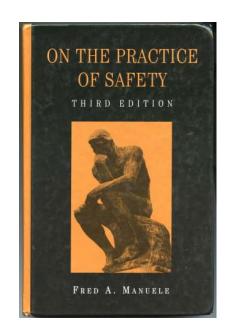
To be able to utilize the platinum rule we have to be able to identify what those needs are without too much effort and then be adaptable and flexible enough to react to our new found knowledge. For many years it has been widely known that people's behaviour falls into different categories. Initially, astrologers broke down the signs of the Zodiac into four groups - Earth, Air, Fire and Water. In the 1920's Dr. Carl Gustav Jung described people's behaviours as being one of the following, Intuitor, Thinker, Feeler and Sensor. Further work has simplified matters and we are now able to think of ourselves in terms of four colours.

RED: THE DIRECTOR GREEN: THE THINKER

BLUE: THE RELATOR YELLOW: THE SOCIALIZER

The iceberg theory

- Professionals have disclosed that the iceberg theory not are based on research.
- Dupont's "STOP" program and other BBS theories fall apart together with the fall of the iceberg theory



Website from Bayer

http://www.baycareonline.com/pub_access/baycare_03.asp

All injuries and occupational illnesses are preventable. All employees are required to subscribe to and actively support this principle.

- •About 95% of all injuries are the result of unsafe acts. The other 5% results from unsafe conditions, which people also have control over.
- •Employees must be trained in the fundamentals of safety that apply to their job functions and to recognize unsafe acts and conditions in the workplace.
- •All exposures can be prevented or safeguarded.
- •Necessary protective equipment must be provided and utilized.
- •To help prevent future injuries, all injuries and incidents, including near misses, must be reported and investigated and corrective action taken.

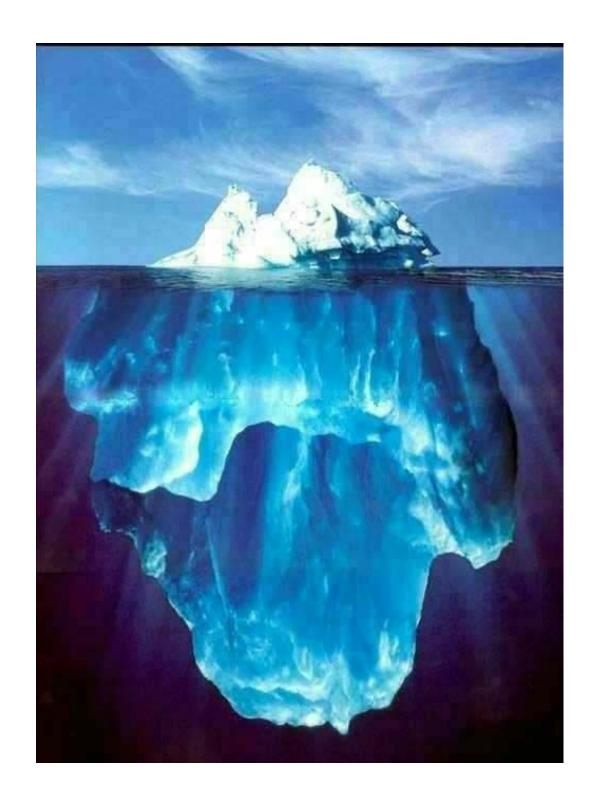
88%-96% of all injuries are caused by unsafe acts

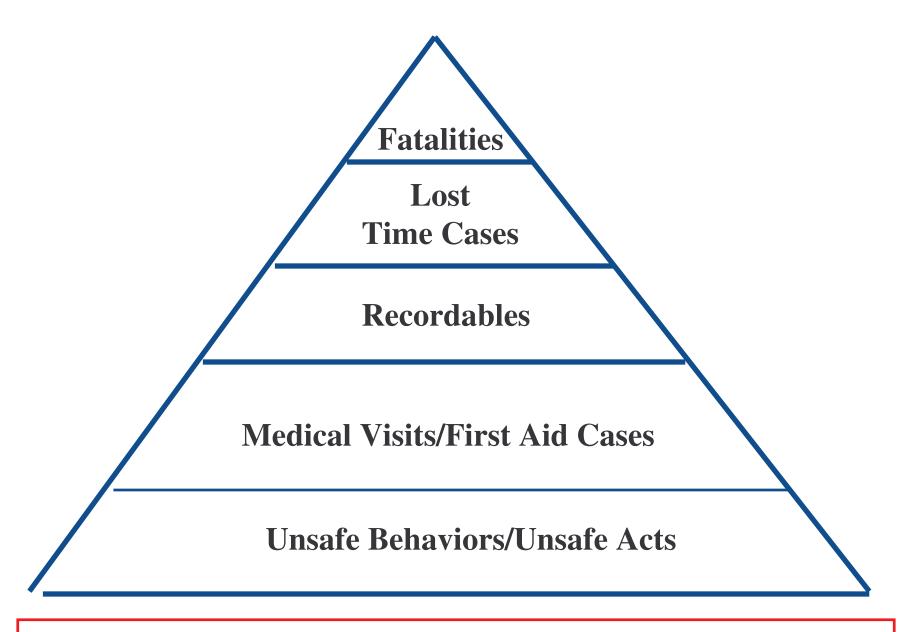
- Originated from H.W. Heinrich
- Insurance investigator
- Studied supervisor accident reports
- Drew conclusions from supervisor recommended corrective actions

1930's Safety Theory BST and DuPont call it "leading edge"



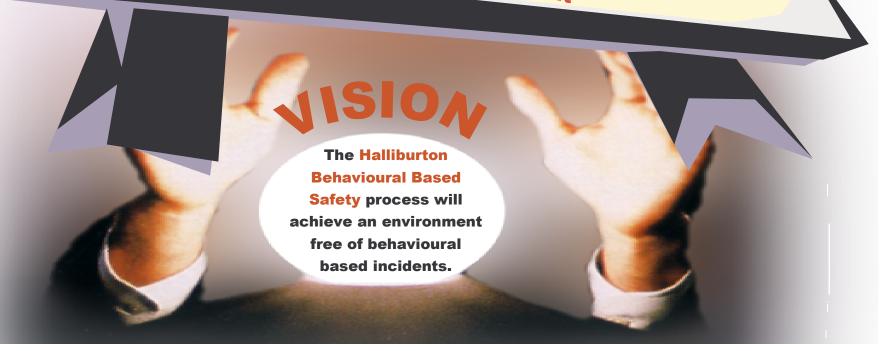
It's a trap!





1930's Safety Theory BST & DuPont call this folk lore "Cutting-Edge Technology"





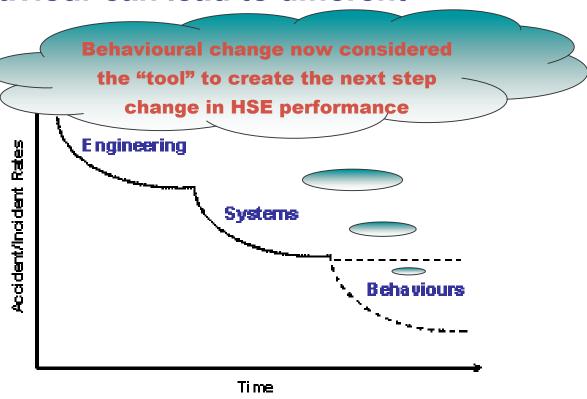
WHY LOOK AT BEHAVIOUR?

- · 85% of all incidents involve "at-risk" behaviour
- Proactive approach vs. reactive
- Consequences control behaviour
- Feedback is a very powerful tool
- The same at risk behaviour can lead to different

consequences

Nothing Happens

- Near Miss
- First Aid
- Restricted Work
- Lost time
- Fatality



WHAT IS BEHAVIOUR BASED SAFETY?

It is a process for:

- Identifying key at-risk behaviours
- Training employees to observe behaviour.
- Providing feedback to those observed
- Removing barriers for safe behaviour

Identifying atrisk and safe behaviours by performing employee observations

Using data to identify and develop action plans based upon; safe behaviours at-risk factors at-risk behaviours barriers.

•It uses principles such as:

- Employee involvement & ownership
- Safety leadership
- Continuous improvement

Benefits:

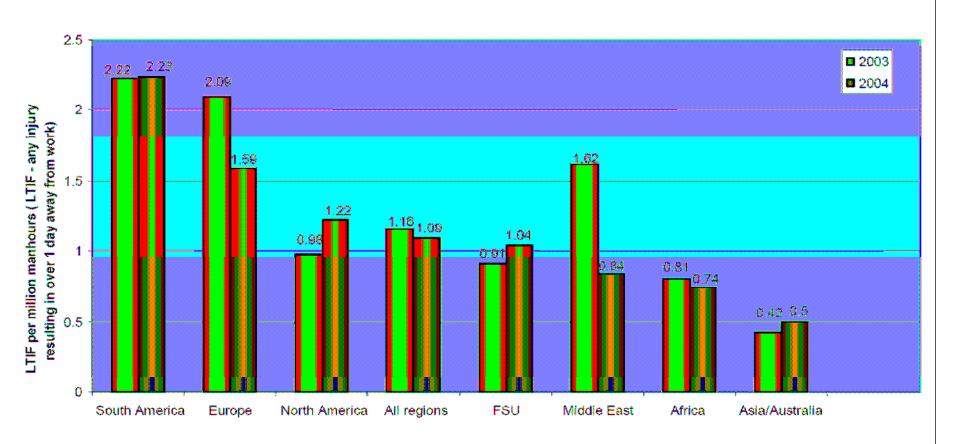
- Improved work environment
- Reduction in incidents & injuries



Use of statistic material

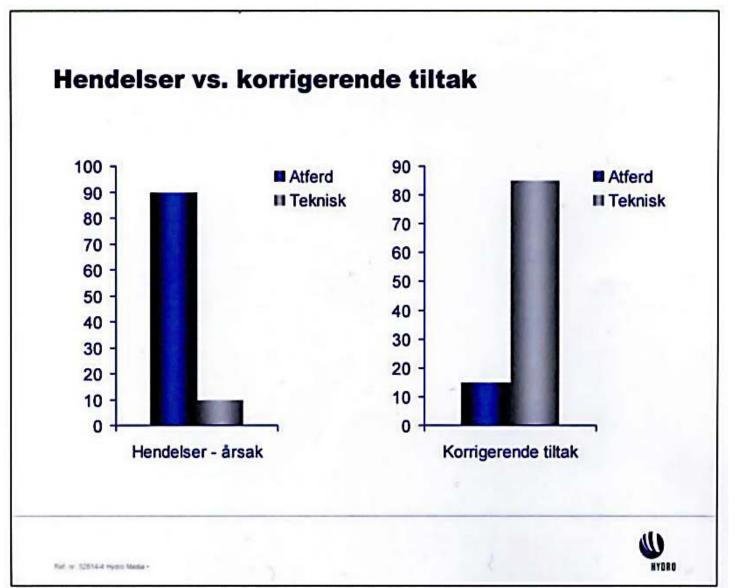
World Wide Oil & Gas Safety Performance

2003 - 2004 comparison

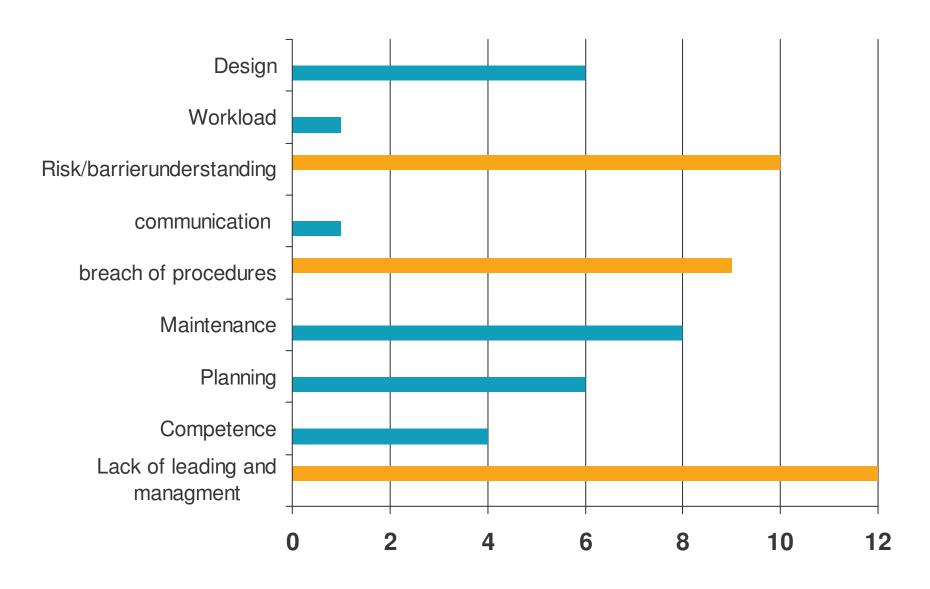


Source: OGP report No 353 and 367, Safety Performance Indicators for 2003 and 2004

Hydro og "kameratsjekken"



An example: reason to accidents



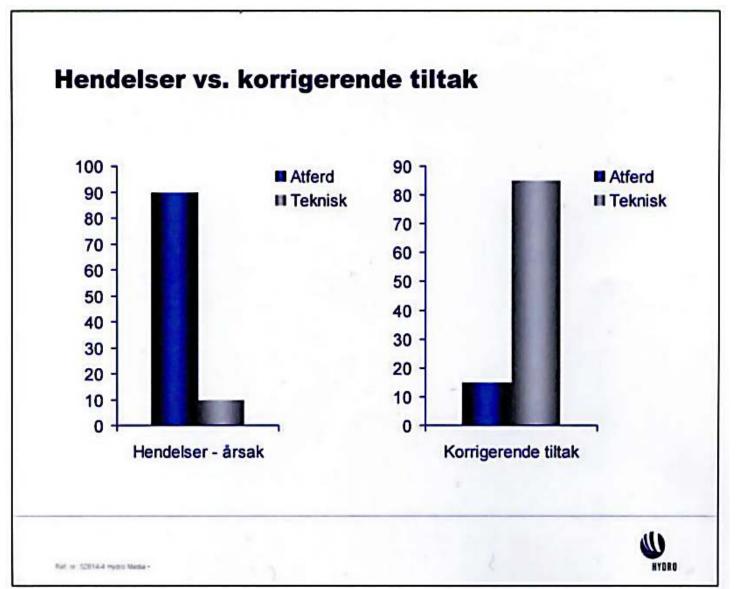
BBS in Hydro

Vi vil oppnå

- Vi ønsker å oppnå en forenkling, og at Kameratsjekk kan erstatte andre aktiviteter på sikt
- Gjennom å observere sikker atferd og gi tilbakemeldinger (ros) oppnår vi å forsterke We want to obtain an simplifying, and that the buddy
- Gjennon check can replace other activities in the future.
- Unngå å iverksette tekniske løsninger på problemer der det er åpenbart at atferd er en direkte årsak
- Få færre positiv u Avoid carrying out technical solutions on problems
- Få en ku where it is obious that behavior is a direct cause oss selv og andre



Hydro and "kameratsjekken"



Laws and regulations are risk based

The laws and regulations put focus on how to reduce the risk to a level as low as practical. The ALARP principle is also a approach.

The solutions with the best risk reducing effect shall always be chosen.

Collective systems shall be chosen before safety actions directed against individuals.

Why is it that the employers choose behavior based system directed against the individuals?

Could it be that they have another hidden agenda?

A risk based approach is necessary when exposed to hazards!



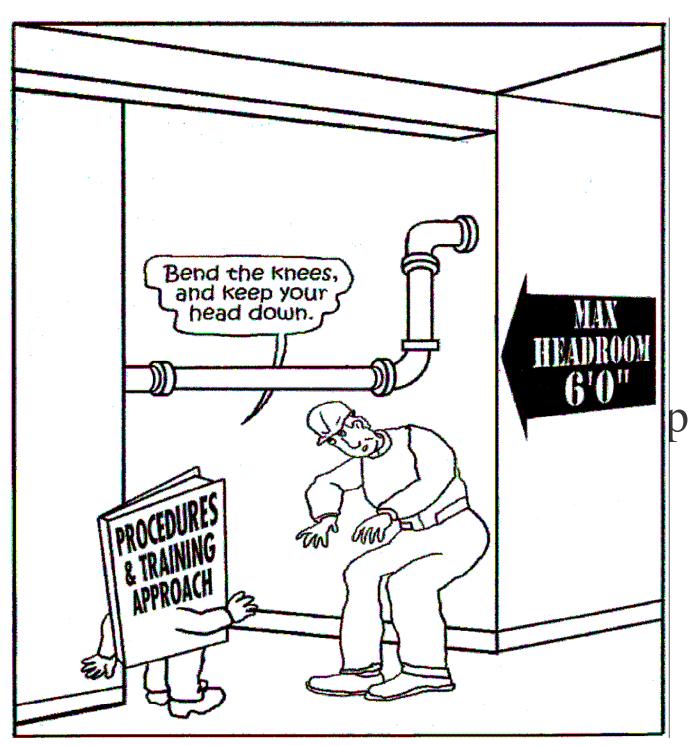




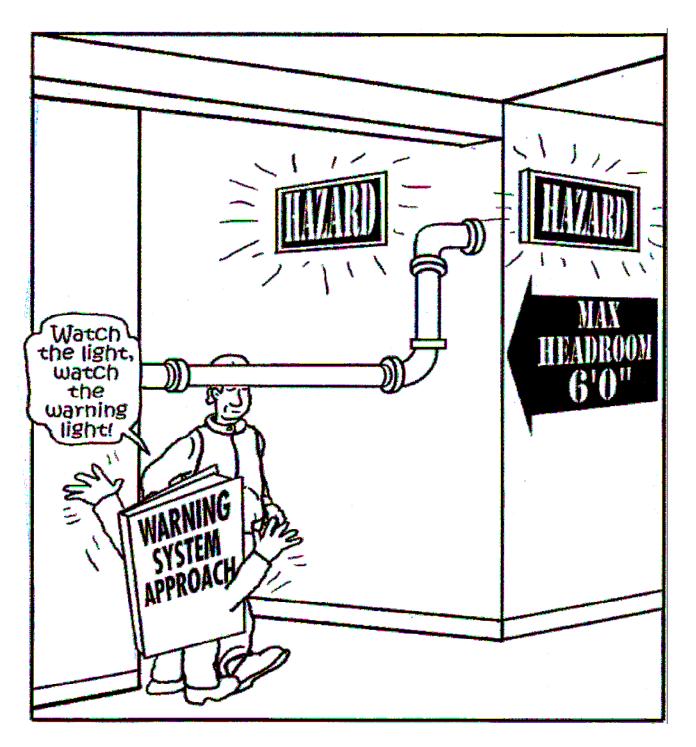
Choosing safety system. Which system will be the best to prevent a new accident?



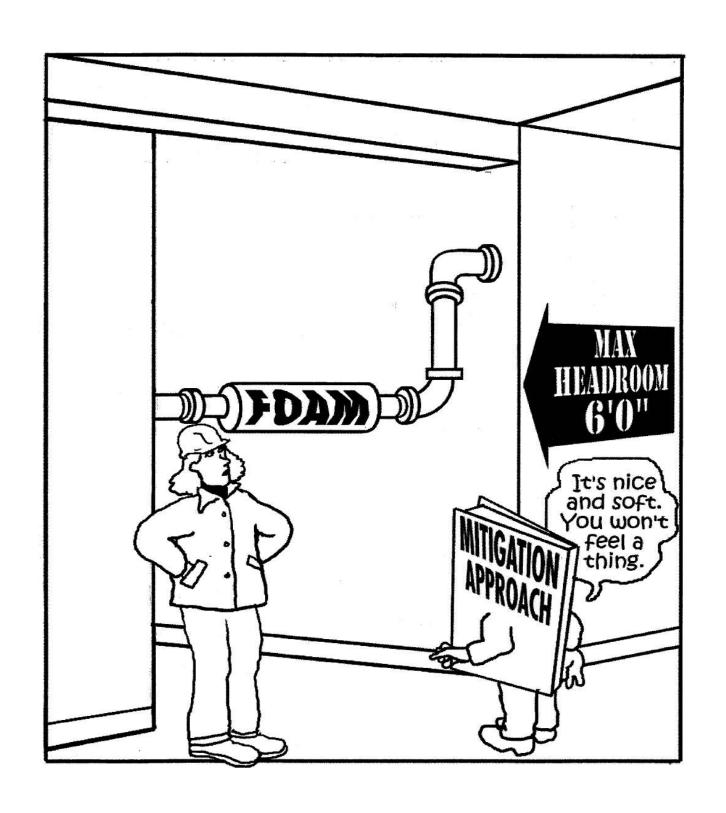
Solve the problem by using PPE



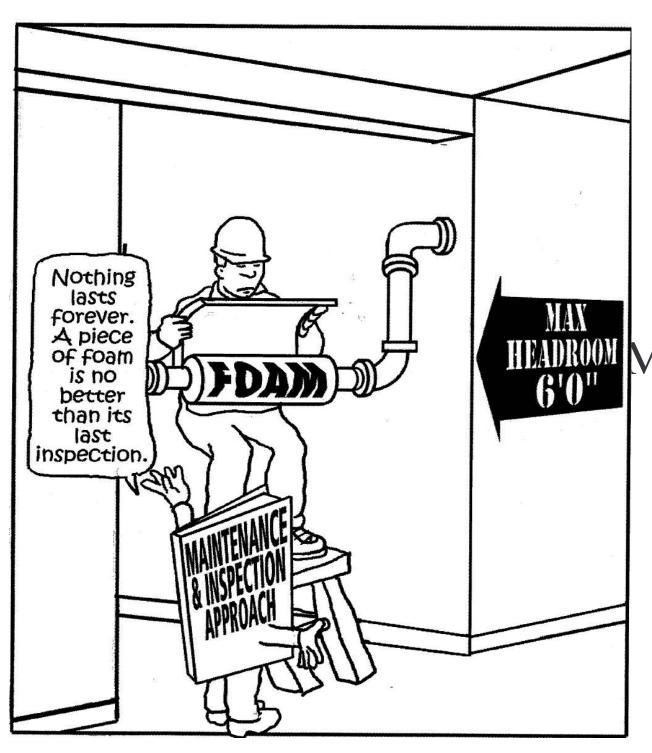
Use procedures and training



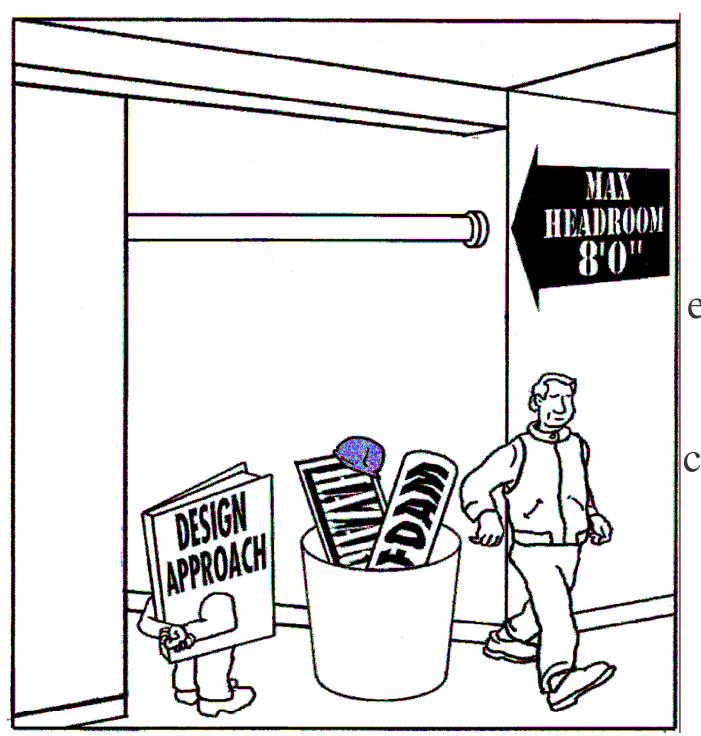
Use alarms and warning signs



Use a mitigation approach



Maintenance and inspection approach



Design and elimination will always be the first and best choice to reduce the risk and hazards!

Safety Systems	Design & Engineering	Maintenance & Inspection	Mitigation Devices	Warning Devices	Training & Procedures	Personal Protective Factors
TYPE OF PREVENTION	Primary Has a goal of eliminating or preventing hazards	Secondary Acts to enhance prevention and minimize hazards	Secondary Acts to enhance prevention and minimize hazards	Secondary Acts to enhance prevention and minimize hazards	Secondary Acts to enhance prevention and minimize hazards	Last Line of Defense Acts to protect to some degree after other systems fail to
SAFETY SUB-SYSTEMS	Technical Codes, Standards, Guidelines which address Design and Engineering Safe Siting Chemical Substitution	Inspection Vibration Monitoring Preventive Maintenance Quality Control of Parts	Relief Valves Diking & Drainage Shutdowns & Isolation Devices Check	Monitors Process Alarms Facility Alarms	Operating Manuals Process Safety Information Operating Procedures Permit	Personal Decision Making and Actions Personal Protective Equipment (PPE)
	Design and Engineering of equipment, materials and processes Organizational (when changes are substantial	Turnaround Frequency	Valves Fire Suppression Devices		Programs Emergency Response Planning & Training Pre-Startup Review	



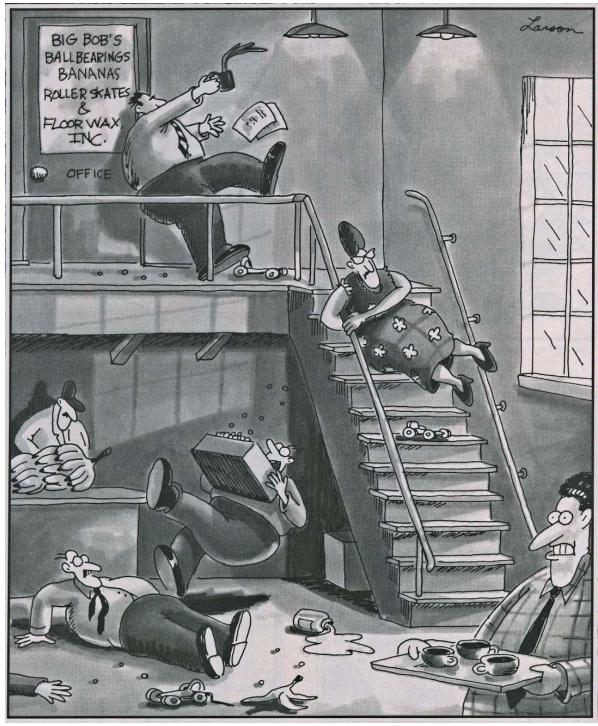
A unions point of view about BBS

- Health and safety approaches like BBS that focus on workers' behavior, will condemn workers as the problem.
- They show contempt of the workers.
- Unions see workers as the solution, not the problem!
- We will have focus on corporate crime

This is not typical workers

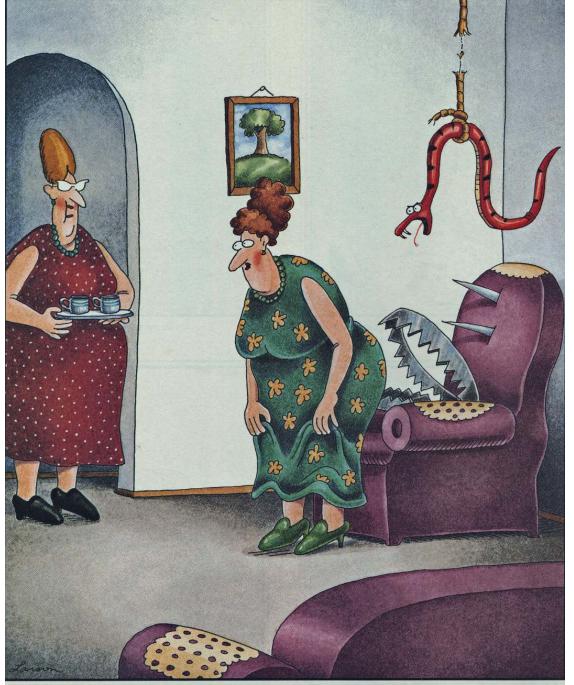








BBS is about learning to live with the hazards instead of removing them





BBS: Learning to live with the hazards

"Oh, wait, Doreen—don't sit there. ... That chair's just not safe."

We will state that you cannot solve serious safety problems by using behavior based safety!









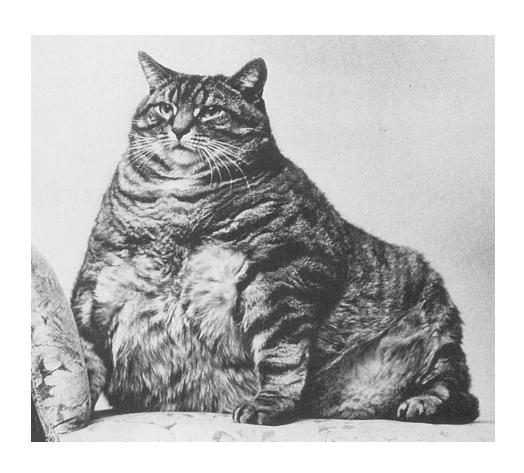




- New management commitment to health and safety
- Involves workers, allows them to impact the work environment
- Give management authority to workers
- Does address some fraction of injury and illness causation
- Many workers and victims believe this stuff

Incentive programs





- Incentive programs can give a wrong focus on safety and health.
- They can fill up the pockets for the bosses, but will not improve the HSE
- It will just give us more "fat cats"

Foto; Life Laughs Last, 1989 ISBN 0-671-68797-1

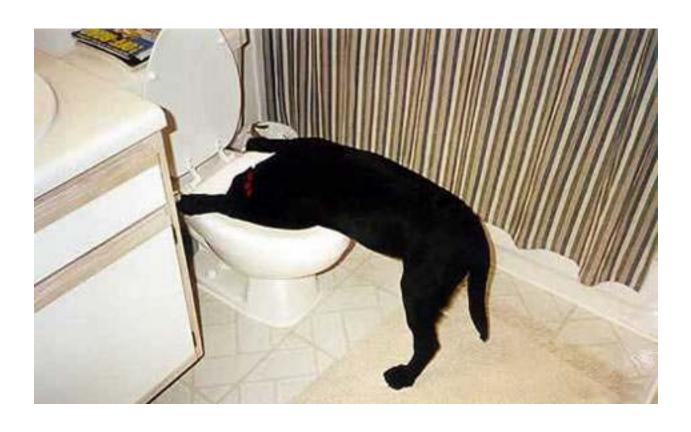
BBS will not protect you from getting sick because of working in a bad working environment





Foto hentet fra boken "The quiet sickness. A phographic chronicle of hazardous work in America" Earl Dotter. 1998, ISBN 0-932627-85-4. American Industrial Hygiene Association

What do SAFE think of behavior based safety?



We absolutely want to get rid off it!

In order to have an "at-risk" behavior, what must be present?

A HAZARD!

All injuries and illnesses are the result of exposure to hazards.

There are <u>no</u> exceptions!

Health and Safety Process Model



Data Analysis

- OSHA 200 Log
- Medical Visit

Surveys and Questionnaires

Interviews

Worker Complaints

Government Regulations

Inspections/Audits

Prioritize Hazards Risk Analysis

Select Controls
Based Upon
Hierarchy

Behavior Based Process Model



Data Analysis

- OSHA 200 Log
- Medical Visit

Surveys and Questionnaires

Interviews

Worker Complaints

Government Regulations

Inspections/Audits

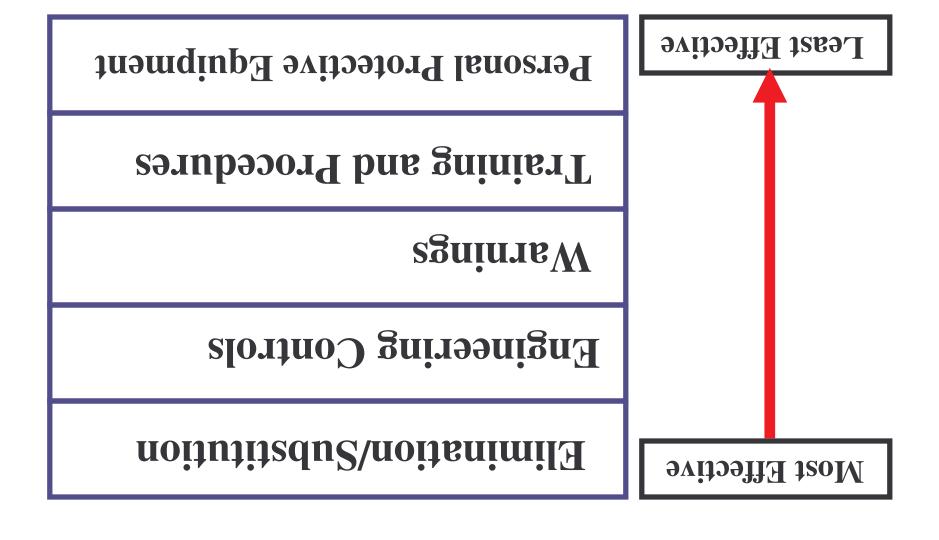
Prioritize Hazards Risk Analysis Duck
Dodge
Jump Out of the Way
Lift Safely
Wear PPE
Avoid "Line of Fire"
Eyes on task

How do we CONTROL hazards in our workplaces?

Hierarchy of Controls

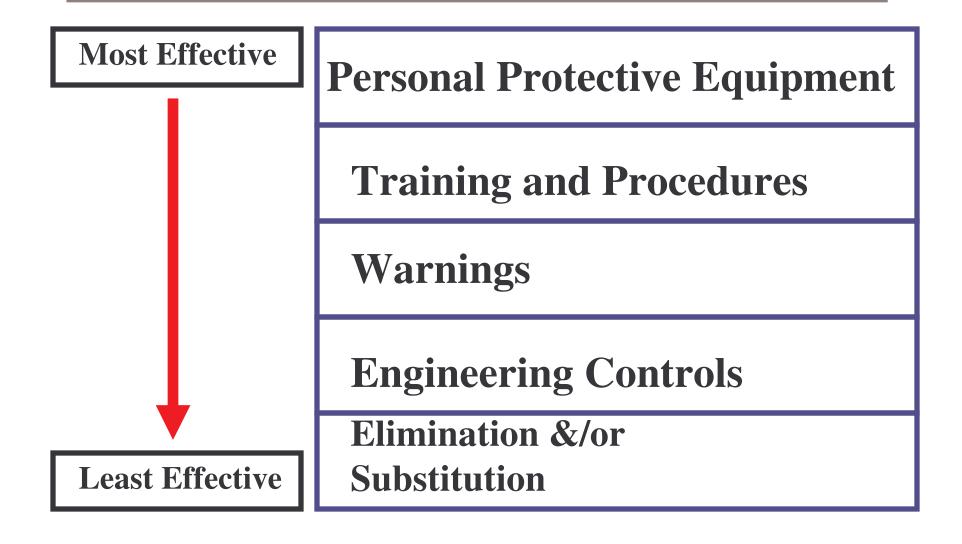
Most Effective Elimination or Substitution **Engineering Controls** (Safeguarding Technology) **Warnings Training and Procedures** (Administrative Controls) **Least Effective** Personal Protective Equipment

Hierarchy of Health and Safety Controls





Consequences Of A Behavior Based Program Is To Turn The Hierarchy Upside Down



Common Behavior Based Program Elements

- Critical behavior lists
- Workers observe workers
- Training for observers
- Frequent observations of workers to identify at unsafe behaviors
- Heavy emphasis on PPE, "body position" and "line of fire"
- Commitment of resources

Corporate climbing



Holding in the rails when walking in stairs have become a way to submit and show that you have the right attitude and behavior to safety!

The real world and the head office is not the same





Humans can only do a limited amount of physical strain before they get sick







BBS and safety

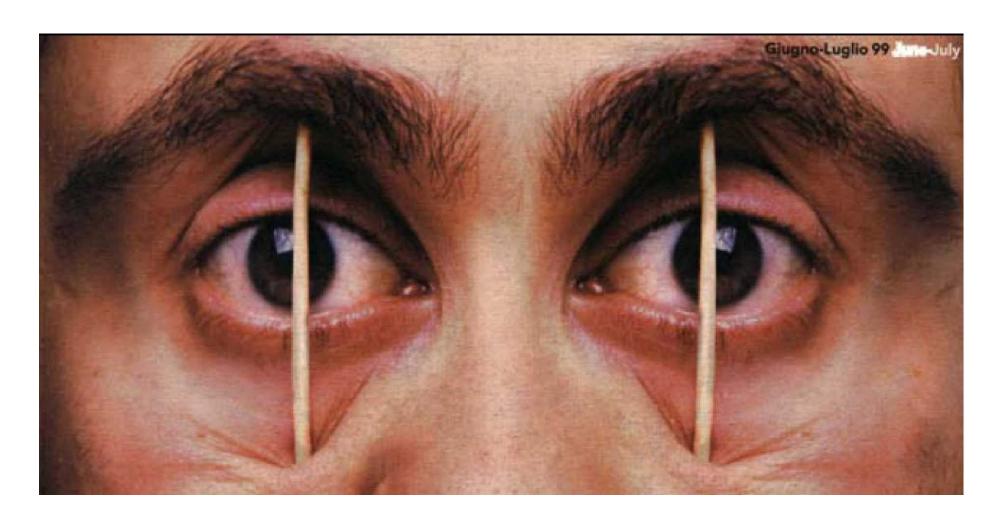
- •BBS will put focus on lost time accidents
- •BBS will not put focus on working environment and health
- •BBS will put focus on individual errors

Why eliminate the hazard when you can buy Personal Protective Equipment?

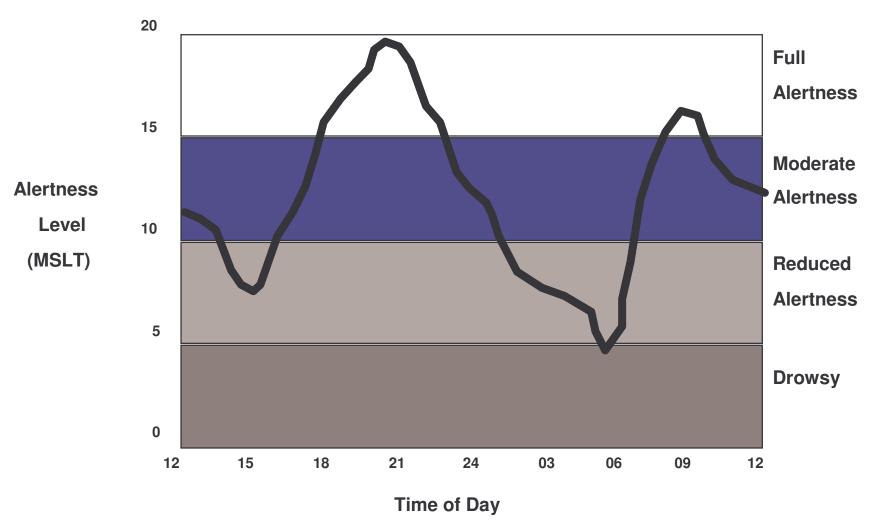




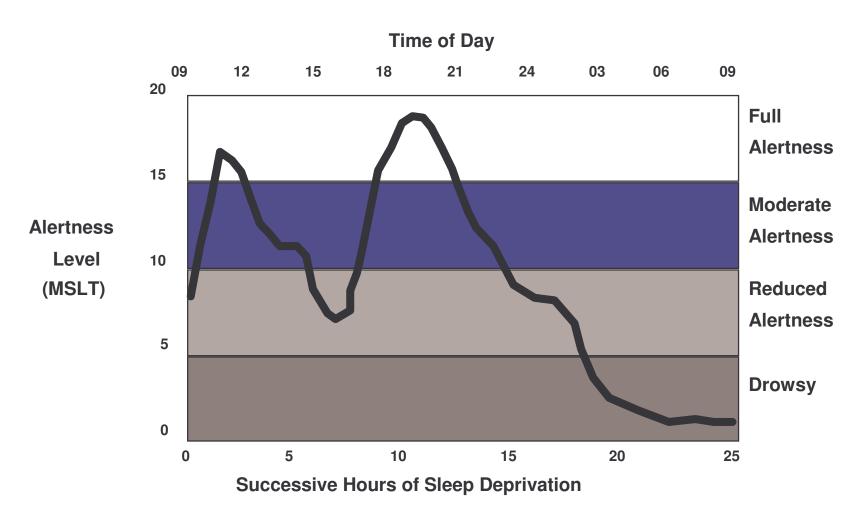
24/7 fatigue



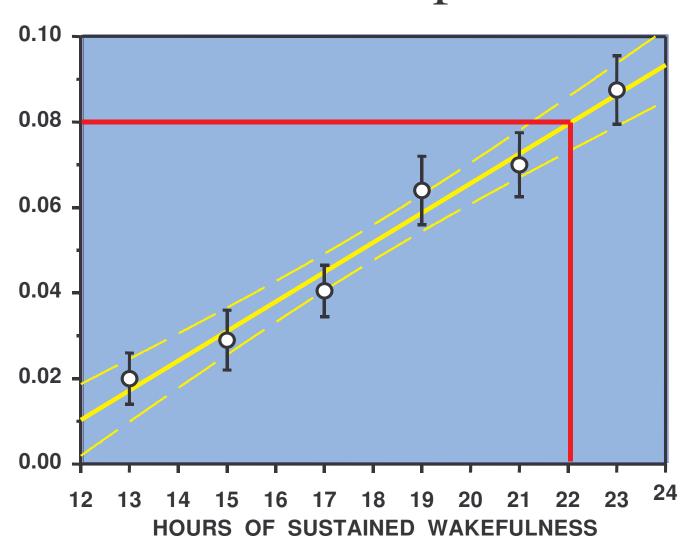
Circadian Rhythm of Human Alertness (With Normal Quantity / Quality of Sleep)



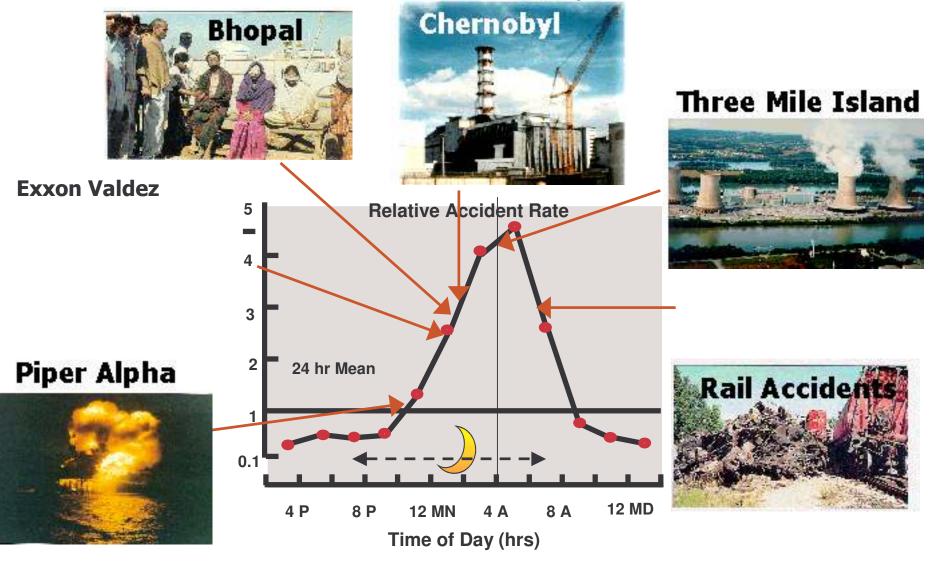
Determinants of Human Alertness: Extended Hours Without Sleep



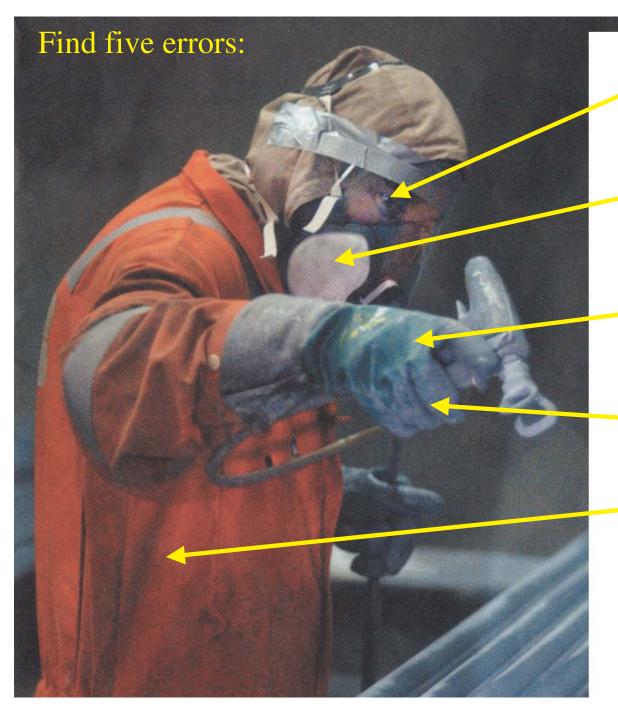
Equivalence of Fatigue Impairment to Alcohol Impairment



Business Costs: Severity of Accidents







Eyeprotection ?

Filtermask when spaypainting?

Wrong glowes

Safety hoop missing

Not wearing suit to protect against chemicals

Picture from Status 04.2002



Why not accept systems with behavior based safety, BBS

- BBS is not about safety
- It is about shifting blame and focus from the employer to the workers
- BBS is about power and control
- There is no room for unions or collective thinking in BBS. Just individual blame.
- BBS is a long term strategy for union busting

ADVANCED CORE TECHNIQUE CRITICAL BEHAVIORS INVENTORY

	Being ormed	Observer	Date		
1.0	ъ .	W 18 ***		C 6	C
1.0		Use and Position		Sare ?	Concern ?
	1.1	Body Placement Pinch Points		?	
				•	?
		Eye Contact		?	?
		Stability		?	?
• 0	1.5	\mathcal{E}		?	?
2.0		CEDURE		2	2
	2.1	Sequence/Step		?	?
	2.2	Work Pace		?	?
	2.3	1 1		?	?
	2.4	2		?	?
	2.5	Communication		?	?
3.0	Selec	tion/Technique			
	3.1	Tool		?	?
	3.2	Equipment		?	?
	3.3	Vehicle		?	?
4.0	Perso	onal Protective Equipment			
	4.1	Gloves		?	?
	4.2	Proper Clothing		?	?
	4.3	Eye Protection/Face Shield/Goggles		?	?
	4.4			?	?
	4.5	Hearing Protection		?	?
	4.6	Hard Hat		?	?
	4.7	Foot Protection		?	?
	4.8	Respirator		?	?
5.0	Facil	*		•	•
	5.1			?	?
		Pot Condition		?	?
	5.3	Housekeeping		?	?
6.0	Ohte			•	•
0.0	6.1	Special Items		?	?
Item No.		Comment			
					Advanced CORE Techniqu

ADVANCED CORE TECHNIQUE

			FHAVIORS INVENTORY		
Task	/				
Perfo)[6.0 Pers	sonal Protective Equipment		
1.0		6.1	Gloves	2	?
1.0				:	
			Proper Clothing	?	? ? ? ? ? ?
		6.3	Eye Protection/Face Shield/Goggles	?	?
		6.4	Fall Protection	?	?
2.0			Hearing Protection	?	2
2.0			:		
		6.6	Hard Hat	?	?
		6.7	Foot Protection	?	?
		6.8	Respirator	?	?
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		Proper Clothing	? ?		
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	4.4	Fall Protection	? ?		
	4.5 4.6	Hearing Protection Hard Hat	? ? ? ?		
	4.7	Foot Protection	? ?		
	4.8	Respirator	? ?		
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	5.1	Building Condition	? ?		
	5.2	Pot Condition	? ?		
<i>(</i>	5.3	Housekeeping	? ?		
6.0	Ohte 6.1	e rs Special Items	? ?		
	0.1	Special fiells	1 1		
Item	No.	Comme	nt		
			Advanced		
			CORE		
			Technique		

"Staying out of the line of fire" replaces effective safeguarding and design.

"Proper body position" has become a replacement for a good ergonomics program and well designed work stations.

And "Personal Protective Equipment" becomes a substitute for noise control, chemical enclosures, ventilation, and toxic use reduction.

Why eliminate the hazard when you can buy personal protective equipment?

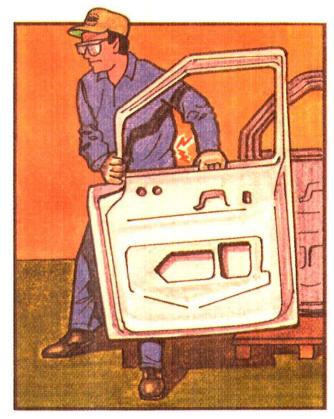


Alaska Governor's Safety & Health Conference March, 1999

Ergonomics: Improvements Using Behavior-Based Safety

Presented by James B. Spigener, VP of Seminars & Training, Behavior Science Technology, Inc. Ojai, Ca.

Cumulative trauma problems are a serious concern to employers. Companies have tried many strategies to try to minimize their exposure to these injuries. The behavior-based safety process is effective at reducing the majority of work-related injuries, since at-risk behavior is the cause of most injuries, including those that result from cumulative trauma. Attendees will learn about creating operational definitions for an ergonomics behavior, observing for those behaviors, and providing appropriate feedback.



at-risk behavior is the cause of most injuries, including those that result from cumulative trauma

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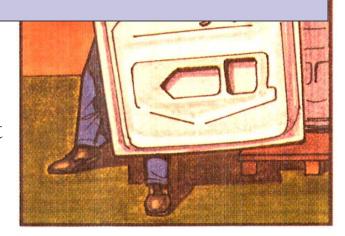
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"So putting up a guard might in fact encourage them (workers) to get closer to the hole that's being guarded, or encourage them to take more risks because of the extra perceived safety by that guard."



E. Scott Geller, NACOSH Meeting, Washington D.C., April 9, 1997

• The implication is that it is not hazards on the job that cause injuries and illnesses, but it is the behavior of those exposed to the hazards (victims) that cause injuries and illnesses.

• BS Theory:

- Workers are the problem, not the solution.
- Change the worker, not the hazard.

Why Behavior Based Programs Can Be Attractive

- New management commitment to health and safety
- Involves workers, allows them to impact the work environment
- Give management authority to workers
- Does address some fraction of injury and illness causation
- Many workers and victims believe this stuff

Management will provide "PERKS"

- Time off the job
- Access to management
- Willingness to correct some conditions that they would not correct for the union
- Office
- Status

Employer Programs, Policies & Practices Related to Behavior-Based Safety

- Safety Incentive Programs
- Injury Discipline Policies
- Programs that focus solely on Lost Work Days or Reported Injuries

Disincentives to Reporting Injuries and Illnesses

- Awards (prizes and money) for not have a recordable or lost time case (or having a low rate)
- Discipline issued after workers are injured
- Drug testing after every injury
- Peer pressure





Phillips Chemical Company, Pasadena, Texas 1989

•Had just completed 5,000,000 hours without a lost time injury

At the same time they had:

- Explosion and fire
- •23 dead
- •232 injured

Safety Incentive Program Claims Not Supported by Evidence, OSHA Official Says

A review of literature for the Occupational Safety and Health Administration concludes there is no basis for employer claims that their safety incentive programs actually make workplaces safer, an agency official told an OSHA advisory committee.

Marthe Kent, director of OSHA's office of Regulatory Analysis said the agency's review of safety incentive programs also indicates there is "often a chilling effect" when the programs discourage the reporting of injuries and illnesses.

Kent reported the findings to the National Advisory Committee on Occupational Safety and Health, which asked for the review. She said, "empirical evidence is sadly lacking" that these programs improve safety.

The review was prepared for OSHA by the consulting firm Dennison Associates of Washington, D.C.

Safety incentive programs are used by employers to encourage workers to maintain good safety records. In some cases, workers who avoid accidents are rewarded with bonuses, jackets, briefcases and other items. Other incentive programs use feedback and positive reinforcement as rewards.

OSHA's review found two basic programs: those that require improved work practices, such as the increased use of safety glasses; and others that reward reductions in the number of injuries and illnesses reported.

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Incentives Drive Down Reporting

"The number of serious workplace injuries reported in the US has fallen steadily for the last five years. That should be a good thing. Unfortunately, fatalities have inched upward at the same time, from 5,497 in 1992 to 5,594 in 1997. That, says the Occupational Safety and Health Administration just doesn't add up. If there are fewer injuries, their models indicate that there ought to be fewer fatalities. The explanation, according to OSHA's Marthe Kent, director of safety standards and programs? The growth of incentive programs, prizes, safety bingo and milestone awards are putting pressure on workers not to report injuries. Fatalities are a little harder to cover up, so those numbers remain accurate."

Excerpt from "OHS Canada" October/November 1999

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Excerpt from "OHS Canada" October/November 1999

Union Forces Management to Abandon DuPont STOP Program for Employees

- An employer planned to implement the DuPont STOP program without bargaining
- The Union demanded to negotiate about the safety program
- Management refused to bargain or provide requested information to the Union
- In an unfair labor practice charge filed by the American Postal Workers Union - Philadelphia Local - the National Labor Relations Board supported the Union's position that management must bargain with the Union over a safety program that affects its members

Remember - health & safety is a mandatory subject for bargaining!

"Everyone, and that includes you and me, is at some time careless, complacent, overconfident, and stubborn. At times each of us becomes distracted, inattentive, bored, and fatigued. We occasionally take chances, we misunderstand, we misinterpret, and we misread. These are completely human characteristics."

> Al Chapanis, Former Professor of Human Factors Engineering Department, Johns Hopkins University

"Because we are human and because all these traits are fundamental and built into each of us, the equipment, machines and systems that we construct for our use have to be made to accommodate us the way we are, and not vice versa."

Al Chapanis, Former Professor of Human Factors Engineering Department, Johns Hopkins University "All too often, however, victimblaming has characterized responses to the problem, and emphasis on training and education have taken precedence over more effective ergonomic and 'passive' approaches that do not place the burden of prevention on the workers."

Susan Baker, Professor of Health Policy and Management Director of the Johns Hopkins Injury Prevention Center

Union Approach to Comprehensive Worksite Safety and Health Program

Elements Include:

- Management commitment
- Worker and Union involvement
- Hazard identification and assessment
- Hazard prevention, elimination and control
- Worksite inspections and incident investigations
- Evaluation of program effectiveness
- Medical care

Mechanisms:

- Health & Safety Committees (union only & joint)
- Procedure to shut down hazardous jobs
- Right to refuse unsafe work
- Mechanism to review workplace changes
- Measure hazards and control efforts, not just reported injuries
- Training and Education

Fundamental Principles of A Union Approach to Safety and Health

- Injuries and illnesses are the result of exposure to hazards
- Labor and management goals differ
- Union only mechanism to protect our interests
- Worker and Union involvement in every aspect of program
- Union representatives need time, access and resources

Union View of Critical Worker Behaviors

- Identify root causes of injuries and illnesses
- Communicate problems to Union health & safety committee
- Filing health and safety grievances when needed
- Refusing hazardous and/or unsafe work
- Reporting injuries and illnesses
- Identifying management who are not addressing health and safety problems

"Rather than being the main instigators of an accident, operators tend to be the inheritors of system defects created by poor design, incorrect installation, faulty maintenance and bad management decisions. Their part is usually that of adding the final garnish to a lethal brew whose ingredients have already been long in the cooking."

James Reston, University of Manchester <u>Preventing Accidents at Oil and Chemical Plants</u>

Union View - Identify Hazards

A hazard is a condition or set of circumstances that can cause harm

- Crushing
- Shearing
- Noise, vibration
- Chemical, gases, fumes, mists, dusts
- Entanglement
- Pinch point
- High pressure
- · Electrical

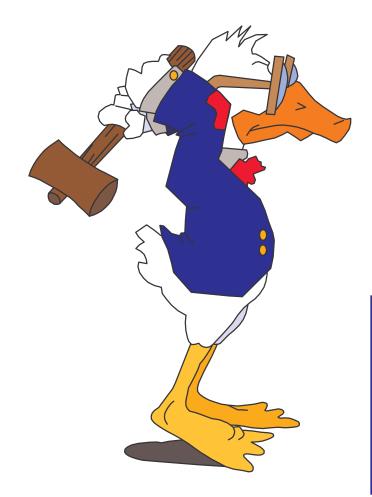
- Ergonomics-posture, force, repetition
- Lifting
- Slips, Trips, Fall
- Fire
- Radiation
- Excessive hours of work
- Inadequate staffing
- Production pressures



It is better to slay a dragon than to teach people ways to live peacefully with him!

Whose behavior needs to be changed to improve health & safety at your workplace?





Get rid of Behavior
Based safety
and
Incentive Programs





The best way to stop BBS, is to spread knowledge about the consequences it has to safety and working environment.



By visiting these web sites or search the internet for "behavior based safety" or "behavioral safety", and you will find what you are looking for. Some of the material in this presentation is borrowed from these WebPages.

http://www.hazards.org/bs/

http://ohsrep.org.au/index.cfm?section=12&category=106

http://www.uswa.org/uswa/program/content/1611.php