

Fix Information Overload: Include a Visual Summary of Important Documents

<h3>Lockout Tagout</h3> 	<h3>Lockout Means You Can't Open It</h3> <p>You cannot turn the wheel.</p>  <p>You cannot lift the handle.</p> 	<h3>Locks</h3> <p>Individual Lock</p> <ul style="list-style-type: none"> • red • your picture • only you have the key  <p>Group Locks</p> <ul style="list-style-type: none"> • black • no pictures • only one key for all the locks in the group. 
<h3>Lockout Plan for Every Lockout</h3> 	<h3>Remove Any Leftover Trapped Energy</h3> <p>His hand depends on it.</p>  <p>electrical thermal gravity tension pressure</p>	<h3>Group Lockout</h3> <p>Lockout with three or more people requires a lockbox.</p>  <p>Black group-locks (all open with one key) used to lockout the equipment.</p> <p>Red locks (individual locks) go on the lockbox when the key for the black locks is inside.</p>
<h3>Car Seal on Lockbox</h3> <p>After locks in place: • put key for black locks in lockbox</p> <p>Attach car seal to lockbox</p>  <p>Write car seal number on Lock Plan</p> <p>If car seal is broken before work is finished, you have a problem. Recheck all the locks.</p>	<h3>Two-Person Check</h3> <p>At least 2 people must check every lockout location.</p>  <p>Audit results: 1 in 12 of our lockouts is done incorrectly.</p>	<h3>Non-Owner Lock Removal</h3> <p>He forgot to remove his lock.</p>  <p>To cut off his lock:</p> <ul style="list-style-type: none"> • be certain he is not at work • try to call him wherever he is • superintendent written permission is required

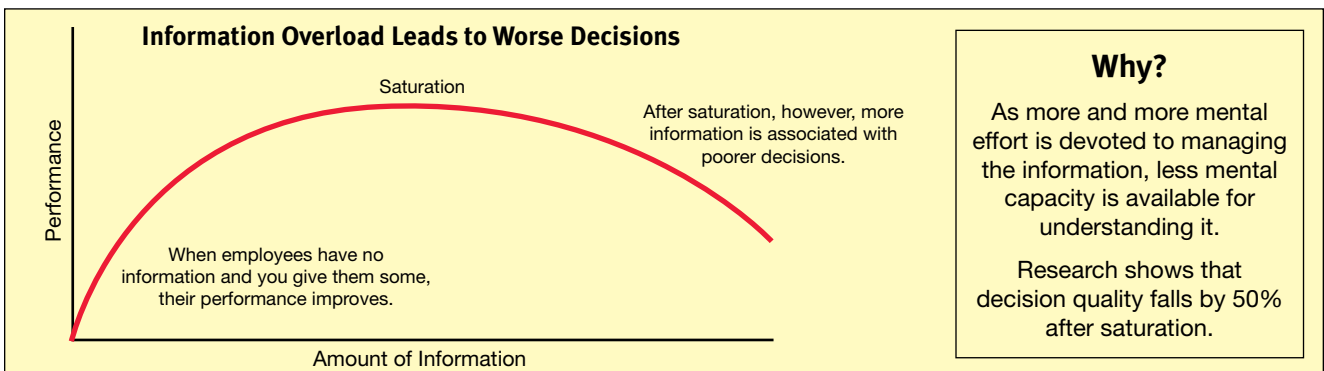
← Make Sure This Sits on Top of That →

Revision: 4	Control of Hazardous Energy N.A. Corporate Control	Section: 1
Date: 30 January 2018		Page 1 of 12
Title: Lock Out Tag Out (LOTO)		

- This N.A. Corporate Control (LOTO) is intended to prevent injury to any employees by stipulating safety requirements prior to any servicing or repairing equipment, and safeguarding the welfare of any employees working in, on, or around machines or equipment undergoing servicing. LOTO is dedicated to avoiding unexpected energization, startup or release of retained energy during repair, maintenance, setup, or other non-routine work. Following these requirements is essential to the creation of safe working environment for all employees.
- This procedure applies to employees whose duties require them to service, repair, lubricate, operate or otherwise perform work on power driven equipment.
- This procedure covers De-energization guidelines related to Lockout/Tagout and Safe Work Practices for working on electrical energized equipment.
- This procedure does not apply to work performed by utility contractors on overhead power lines (facility main electrical supply).
- This procedure applies to all equipment that has the potential of containing stored energy and/or is having repair work performed by maintenance due to failure to operate (either electrical, mechanical, hydraulic, pneumatic, and/or adverse condition) and/or is a new installation or relocation, and/or any other condition that warrants the following of this procedure.

2.0 Definitions

- Authorized employees** include anyone who has been trained in and utilizes the lockout/tagout procedure or may perform maintenance/repair work on electrical energized equipment.
- Affected employees** are those whose jobs require them to operate or use a machine or equipment on which maintenance or servicing is being performed or whose job requires them to work in an area in which such servicing or maintenance is being performed under the lockout/tagout program.
- Energy Source** is the means by which the equipment is powered. Sources include pneumatic, mechanical, thermal, chemical, electric, hydraulic, and stored/residual (such as stored in a spring or trapped pressure). More than one power source may be present on a given piece of equipment.



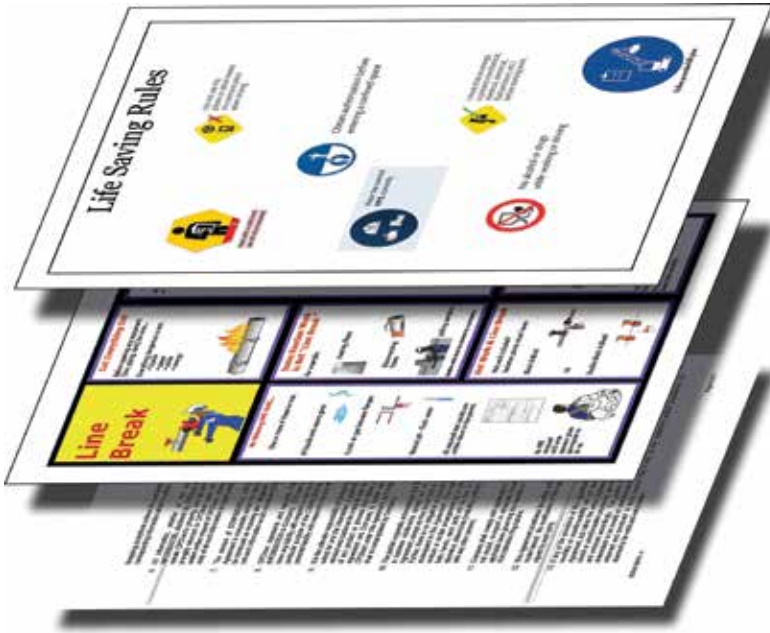
This Safety Minute was prepared by Larkin Communication (www.larkin.biz) in partnership with CEP.

Fix Information Overload

Recommendation: Layer Your Documents by Increasing Amount of Complexity

Do not delete long text-based documents (you need them). Instead, create layers of complexity so your employees can move to the level needed for their task.

Example: Line Break Procedure Showing Three Layers of Complexity



Top Layer: Life Saving Rules

- mostly pictures
- few details

Middle Layer: Line Break

- combination of pictures and text
- visual summary of critical content

Bottom Layer: Line Break Procedure

- all text
- encyclopedic approach to the procedure

Let your employees choose the level of complexity needed for their task.

The middle, picture-based layer (shown at right) is the layer that most companies are missing, but it is the easiest for employees to recall.

A picture-based document has fewer words and is easier to recall than a text-based document.		
	Text-Based	Picture-Based
Number of words	2,739 words	202 words
Pages	8 pages	1 page
Time to read	15–20 min	1 min
Complexity level	College-level	6th-grade-level
Percent of U.S. adults who can read at that level of complexity	17%	65%
Recall of document content	Baseline	800% better



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Decision Quality Declines by 50% After Information Saturation

Angelika Dimoka, director of the Center for Neural Decision Making at Temple Univ., recruited volunteers to try their hand at combinatorial auctions for airport landing slots. These are complex auctions in which bidders must consider a dizzying number of factors. The challenge is to buy the combination of slots you want at the lowest price.

- As the auction took place, Dimoka measured the volunteers' brain activity with functional magnetic resonance imaging (fMRI).
- As the information load increased, so did activity in the dorsolateral prefrontal cortex (PFC), a brain region that is responsible for decision making and control of emotions.
- But, as the researchers gave the bidders more and more information, activity in the dorsolateral PFC suddenly fell off, as if a circuit breaker had popped.
- The bidders reached information overload. At this point, they started making mistakes and poor decisions.

In another example, two groups of MBA students managed a fake portfolio of stocks.

- One group was intentionally overloaded with information.
- The other group saw only stock-price changes.
- Stocks chosen by the overloaded group performed 50% poorer.

Source: Begley, S., "The Science of Making Decisions," *Newsweek*, www.newsweek.com/science-making-decisions-68627 (Feb. 27, 2011).

Why Does Information Overload Lower Performance?

- Employees have difficulty finding the most relevant information
- Too much emphasis on the most recent information as opposed to the most important information
- Filtering information takes time from learning the information
- Feelings of being overwhelmed result in less motivation to find the best solution

Source: Hemp, P., "Death by Information Overload," *Harvard Business Review*, <https://hbr.org/2009/09/death-by-information-overload> (Sept. 2009).

Inverted U-Curve

The plot on the first page of this Safety Minute describes how information overload leads to worse decisions. The red line shows an inverted U-curve often found in information overload research. It refers to a decline in decision-making quality as incoming information surpasses the saturation point.

The saturation point is the point at which the amount of information coming in is greater than the information processing ability of the receiver.

Source: Roetzel, P., "Information Overload in the Information Age: A Review of the Literature from Business Administration, Business Psychology, and Related Disciplines with a Bibliometric Approach and Framework Development," *Business Research*, pp. 1–44, <https://doi.org/10.1007/s40685-018-0069-z> (2018).