

WHY DO MAJOR ACCIDENTS HAPPEN???

BECAUSE WE LET THEM HAPPEN

By Mark Paradies



(Except for Concorde, pictures are not of the actual accidents)

It Will Happen at Your Company

The more things change, the more they remain the same. Reading about three recent major accidents reminded me that a major accident CAN happen to any company. If you think it can't happen where you work, then it WILL happen. Managers at an airline and two refineries all missed or ignored the warning signs that could have helped them prevent disaster. They weren't immune. Neither are you. Managers everywhere must hold themselves to a higher standard or they too will miss warning signs and will fail to act before it's too late.

Concorde Crash

For those that don't remember the July 25, 2000, fatal crash of the Concorde, all those aboard died when it caught fire and crashed after a tire blew during takeoff. Why did the tire blow? The reason is not important. A tire should be able to blow without causing a fatal accident. But this was NOT the case on the Concorde.

Surprisingly, this was NOT the first time that a tire had blown and caused a fuel leak. Andrew Weir, a UK aviation journalist, researched the precursor events and wrote about them in the *Journal of System Safety*. He found SIX reported blowouts that caused fuel leaks. One such near-miss is recorded in a photo at the top of the next column. One blowout caused a small fire. Yet the Concorde continued to fly.



Concorde Crash Photo



Near-Miss Photo: hole in wing

Of course, action was taken. Tires were scheduled for replacement more frequently. A tire monitoring system was installed (but was not required to be working). The rims were strengthened. But the fuel tanks were never reinforced (until after the accident).

"Fire" Water

Working can be hazardous to your health. Especially when systems that are suppose to keep you safe malfunction.

A refinery employee was engulfed in a fireball when water from the fire main was sprayed on sparks from hot work & "caught fire". How could this happen? Butane and propane had leaked into the fire main.

Was this the first time this had happened? "No!" says the worker's attorney. He had found two prior documented cases of flammables leaking into the firewater system. (Settlement cost: \$8,000,000)



Just a Few More Days

Another article described a recent fatal tank fire that happened after management was warned that the tank's walls were less than the required minimum thickness.

According to the article, a routine maintenance measurement of the tank wall thickness was unacceptable. Instead of shutting the process down and taking the tank out of service immediately, management decided to wait until the next scheduled shut down to repair the tank.

Unfortunately, the tank failed before the shut down and several workers were killed.

Common Thread

How did management miss the warning signs? Are they evil? Stupid? Lazy? No. The problem is something much more insidious:

Complacency

If nothing bad has happened, we can convince ourselves that nothing bad will happen. So push the envelope just a little more. Postpone repairs just a little longer. Economize a little more. NOTHING BAD WILL HAPPEN. And frequently we get away with it. So we, as management, learn to take shortcuts.

But I believe that a truly safety conscious manager must hold himself or herself to a higher standard. What standard? Try this:

1. I will not allow operation of equipment that is outside the approved engineering requirements.
2. I will not allow the operation of equipment that has been shown by previous incidents to be hazardous unless I can implement effective fixes that will eliminate the hazard or eliminate or drastically reduce the consequences of the hazard.
3. If I ever have to choose between profits and fixing problems - even near-misses, I will err on the side of SAFETY.

Can you live with this standard? Yes. And you will stop accidents *before* they happen. Start fixing near-misses *NOW!*

MSHA 15/50 GOAL

MSHA has set a goal for the mining industry. The goal is a 15% reduction in fatalities each year and a 50% reduction in accident rates over the next 4 years.

As part of this program MSHA is training their investigators to find root causes. And what system did they license to use to train their investigators? TapRoot® of course!

See why people improving performance pick TapRoot® for root cause analysis. Read success stories at www.taproot.com. Then attend a course. A list of public TapRoot® courses in 2002 is on page 3.

ARE YOU SOLVING PROBLEMS???



Dilbert reprinted by permission of United Features Syndicate, Inc.

Conference for Problem Solvers

New Conference Title

Wouldn't it be better if everyone was a problem solver rather than just pointing out problems for others to fix?

Now there is a conference that focuses on solving problems (incident investigations, root cause analysis, and performance improvement). The *new* title for this conference is the:

TapRoot®

Problem Solvers' Conference

The conference will be held in Gatlinburg, Tennessee, on August 7-10, 2002, at the Gatlinburg Convention Center.

Conference Objective

The conference has been held seven times since 1994 to provide an opportunity to:

- Discuss the latest improvements in root cause analysis and incident investigation
- Share new and effective methods to improve performance
- Encourage networking among people from different companies, industries, & countries with the common objective of improving safety, quality, reliability, and productivity.

Who Should Attend

If you are interested in developing effective processes for improving human and equipment performance and you would like to hear interesting speakers and discuss topics with your peers and experts known worldwide, then attend this conference.

Conference Topics

The following is a small sample of scheduled conference topics:

- The Behavior Outage
- Lessons Learned from Fatalities
- Accountability / Responsibility
- "How To" Work to Prevent Human Errors
- Culture or Behavior - What comes first?
- Turning Around a Troubled Plant
- Solving Fatigue Problems
- Near-Miss Benchmarking
- Refresh Your TapRoot® Knowledge
- Web Based Basic Investigation Training
- Challenges of an Aging Workforce
- Corrective Action Management
- Behavior Based Root Cause Analysis
- Enterprise Root Cause Analysis Software
- 7 Deadly Sins of Root Cause Analysis

Get Details

The conference fee is \$895. To get a conference brochure or to reserve a seat, e-mail info@taproot.com or call 865-539-2139.

ALBERT EINSTEIN

*Out of clutter, find simplicity.
From discord, find harmony.
In the middle of difficulty,
lies opportunity.*

CONFLICT, "WELL" HANDLED

by Beverly Inman-Ebel
CEO of TLC, LLC

One of my guiding principles is to turn apparent obstacles into opportunities for growth and success. When conflict enters my life, behind the inconvenience of the disruption to life as I know it, I realize I am going to get smarter and will be victorious if I look for the disguised opportunity. The following story sums it up well.

An old mule fell into a farmer's well. The farmer decided it would cost less time and money to bury the mule inside the dry well than to retrieve it. Soon farmhands began shoveling dirt into the well. As the first load of dirt assaulted his back, the mule was mortified! After his many years of dedicated service, he felt devastated that he was being attacked for making a mistake. Within minutes the mule realized that every time a shovel load of dirt landed on his back, he should shake it off & step up.

And so he did. He kept affirming, "Shake it off and step up!" which he followed with action. I imagined that sometimes he panicked; maybe he even faltered for a step or two. He kept affirming & taking action. I think it is important to point out that no one was cheering him on. The workers had been given the directive to bury the problem and they were determined to succeed. As they shoveled more dirt at an increased rate, the mule was able to accomplish his goal faster. Exhausted and battered, the old mule triumphantly stepped over the wall of the well. What initially appeared to be his doom, actually helped him - all because of the manner in which he handled his conflict.

What hole have you fallen into lately? What are you doing with the dirt being thrown at you? Determine what you can do and stop focusing on what you can't do. Never give up. Shake it off. Step up. Live your dream.

About the Author: Beverly Inman-Ebel is the CEO of TLC, Talk Listen Communicate, LLC. She will be presenting a course on making effective presentations prior to the Problem Solvers' Conference. For more information about this course e-mail info@taproot.com or call 865-539-2139.

This article was published in *The Exchange* and is used by permission.

JOSEPH JOUBERT

It is better to debate a question without settling it than to settle a question without debating it.



HOLIDAY GIFT IDEAS

Have a Happy Holiday with TapRoot®

Here is your holiday TapRoot® hint list:

1. Spin-A-Cause™ (Just \$9.95 + S&H)
2. Spin-A-Cause™ T-Shirt (\$9.95 + S&H)
3. TapRoot® Hat (misc colors) (\$14.95 + S&H)

Call 865-539-2139 to order yours!



NEWSLETTER BY *Fast e-mail*

We are ready to deliver this *Root Cause Network™* Newsletter by e-mail. Would you like this service? Drop me an e-mail at mark@taproot.com to let me know.

Why would you want e-mail delivery?

1. Gets to you faster.
2. Pictures are in color.
3. Easy to print and forward.

What is required besides a working e-mail address:

- a.. Your firewall must allow attachments.
- b. You will need Acrobat® Reader (free, www.adobe.com) to display and print your newsletter.

So e-mail me today and start receiving the newsletter by the *fastest* means!

PROBLEM SOLVERS' CONFERENCE

August 7-10, 2002

Gatlinburg, Tennessee USA

In 1994 System Improvements decided to host an annual conference targeted to those who are interested in improving safety, quality, equipment reliability, and productivity. The excellent attendee reviews prove the conference is a runaway success and worth every minute of your time. The next conference is in the beautiful Smoky Mountains. So plan a vacation for your family. Here are just a few activities to think about:

- Smoky Mountain National Park
- Dollywood Theme Park & Water Park
- Ripley's Aquarium of the Smokies
- Country music & comedy shows
- Miles & miles of outlet shopping malls

NEW COURSES

August 5-6, 2002 Gatlinburg, TN

Before the Problem Solvers' Conference

Mistake-Proofing

John Grout, Berry College

Systematic Risk Management

Jim Whiting, risk@workplaces, Australia

Understanding & Auditing an OSHA PSM/EPA RMP Program

Skip Early, Early Consulting LC

Presentation Techniques

Beverly Inman-Ebel, TLC LLC

Advanced

Procedure Writing Skills

Valerie Barnes, PSHA

Human Factors Methods

To Reduce Human Error

Joel Haight, Penn State

Labor & Employment Law for the Health & Safety Professional

James Abrams, Attorney at Law

In our work to help others improve performance, we often meet experts and think, "*WOW! I wish TapRoot® Users could hear this!*" So we decided to sponsor courses by experts so that you can meet and learn from them.

Review the courses above and e-mail info@taproot.com or call 865-539-2139 to get more information about the courses, the instructors, and the great information that you will learn.

TAPROOT® COURSES 2002

Now is the time to start planning to enhance your knowledge of root cause analysis, equipment troubleshooting, and problem solving. Review the upcoming courses below and get your seat reserved by calling 865-539-2139 or, for more info, see www.taproot.com.

2-Day TapRoot® Incident Investigation & Root Cause Analysis Training

1.6 CEUs 2 CIH CM Points \$995

GALVESTON	Jan 23 - 24
LONDON, England	Feb 7 - 8
SAN DIEGO	Feb 20 - 21
MIAMI	Feb 25 - 26
TORONTO, Canada	Feb 27 - 28
SAN ANTONIO	Mar 12 - 13
BRISBANE, Australia	Apr 11 - 12
VANCOUVER, Canada	Apr 15 - 16
ABERDEEN, Scotland	Apr 15 - 16
WASHINGTON, DC	Apr 18 - 19
SYDNEY, Australia	Apr 18 - 19
EL PASO	May 1 - 2
CALGARY, Canada	May 6 - 7
NEW ORLEANS	Jun 4 - 5
SYRACUSE	Jun 20 - 21
LAKE TAHOE	Jun 26 - 27

5-Day Advanced TapRoot® Incident Investigation Team Leader Training

Includes TapRoot® Software

4 CEUs 5 CIH CM Points \$1995

Special: \$500 OFF for prior TapRoot® 2-day attendees when attending a 5-day!

GALVESTON	Feb 4 - 8
LOS ANGELES	Mar 18 - 22
KNOXVILLE (Smoky Mtns)	Apr 22 - 26
HOUSTON	May 6 - 10
CHICAGO	Jun 3 - 7
LONDON, England	Jun 24 - 28
TORONTO, Canada	Jul 22 - 26

Public 5-day course attendees receive the SnapCharT® and Root Cause Tree® Software (\$1,190 when purchased separately).

Equipactor® Equipment Failure Analysis Course (1-day)

0.8 CEUs 1 CIH CM Point \$495

GALVESTON	Jan 25
SAN ANTONIO	Mar 14

Must attend a 2-day or 5-day TapRoot® Course before attending Equipactor®.

Special: Attend either the Galveston or San Antonio 2-day & Equipactor® courses for *Only* \$1,295.

Fax Reader Service Card

(Fax/mail this page for more info or to order)

Fax to: 865-539-4335

Give a *free* 1 year subscription to the person written in below

e-mail newsletter delivery

Change of address

Drop me

To order/register or for more info ✓ box:

Spin-A-Cause™ Price: \$9.95 plus \$10 S&H in US

Spin-A-Cause™ T-Shirt \$9.95 plus \$10 S&H in US

TapRoOT® Hat \$14.95 plus \$10 S&H in US

5-Day TapRoOT® Advanced Team Leader Course:

Write in the Course Location/Date

2-Day TapRoOT® Incident Investigation & Root Cause Analysis Course:

Write in the Course Location/Date

1-Day Equifactor® Equipment Troubleshooting Course:

Write in the Course Location/Date

Info Order

(Only \$1995)

(Only \$995)

(Only \$495)

Credit Card: (Circle One) MasterCard / VISA / Amex Exp. Date: ____/____

Card #: _____

Signature: _____

Name/Title:

Company:

Address:

City, State, Zip:

Phone #:

Fax #:

e-mail:

Issue 53 - December 2001

Add \$10 shipping/handling for US orders & \$50 for orders outside US. Make checks payable to System Improvements on US bank. Prices US Dollars.

WE LET ACCIDENTS HAPPEN

(See Page 1)

TAPROOT® USERS: GO TO AUG CONFERENCE

(See Page 2 & 3)



Issue 53 - Dec 2001 Single Issue Price: \$14.95

ROOT CAUSE NETWORK™ NEWSLETTER

SYSTEM IMPROVEMENTS, INC.

238 South Peters Road, Suite 301

Knoxville, Tennessee 37923-5224 USA

Phone: 865-539-2139 Fax: 865-539-4335

e-mail: info@taproot.com web site: www.taproot.com

POST OFFICE:

ADDRESS SERVICES REQUESTED

PRSR STD
U.S. POSTAGE
PAID
Augusta, GA
Permit No. 347

One of the BEST Newsletters I've Written

- ☞ **We Let Accidents Happen** (Page 1)
- ☞ **MSHA's New 15/50 Goal** (Page 1)
- ☞ **Dilbert on Problem Solving** (Page 2)
- ☞ **Conflict "Well" Handled** (Page 2)
- ☞ **Problem Solvers' Conference** (Page 2 & 3)
- ☞ **7 NEW Courses Premiere in August** (Page 3)
- ☞ **TapRoOT® Courses in 2002** (Page 3)
- ☞ **Fast e-mail** (Page 3)
- ☞ **Holiday Gift Ideas** (Page 3)

NEAR YOU OR VACATION LOCATION?

Go to a TapRoOT® Course in 2002 See www.taproot.com for info

