“Mobile Technology for the Safety Professional”

Presented by:
Randy Cranfill, MESH, CPSI, CSRM
Director of Safety and Loss Prevention, Surry Insurance
Safety in the palm of your hand

As smartphones and tablets have become more integrated into today’s society, so have the applications that run on these devices. Safety professionals are finding that mobile apps may be beneficial in the workplace.

Source-Safety +Health June 2013
Technology

SAFETY

- Emergency Response Guidebook
- Emergency Planning
- Chemical Safety Data Sheets (SDS)
- Lift Calculator
- OSHA 1910 Regulations
- Sound Level Meter
- Inspections/Audits
- Weather Information
Weather Information

• Weather Bug
  – Real-Time Enhanced Pin-Point Forecasts for Locations Worldwide
  – Exclusive DTAs & Severe Weather Alerts - Minutes Matter. Our Dangerous Thunderstorm Alerts (DTAs) provide you 50% faster warnings to severe weather than the competition’s weather alerts. Plus, you get National Weather Service (NWS) warnings and watches to stay informed of severe weather conditions at all your current and saved locations
  – Spark Alerts - Spark, an exclusive feature of WeatherBug, turns your smartphone into a personal lightning detector. Only WeatherBug can bring minute-by-minute, mile-by-mile Spark lightning strike alerts to you, in real-time, based on data from the WeatherBug total lightning detection network!

*Mobil apps and Windows
LIGHTNING DATA:

• Spark™ takes real-time lightning data from the world’s largest and most advanced Total Lightning Network and updates automatically.

• Whether the nearest lightning strike is where you are standing or across the world, Spark™ provides lightning alerts and safety recommendations based on how close lightning is to you.
Emergency Response Guidebook

• Quickly Identify Hazmat Emergency Procedures
• PHMSA's 2012 Emergency Response Guidebook provides first responders with a go-to manual to help deal with hazmat accidents during the critical first 30 minutes.
• The ERG contains an indexed list of dangerous goods and the associated ID number, the general hazards they pose and recommended safety precautions.

*Mobil apps (iPhone) and Windows (**There is a charge for this one)
GUIDE 111
MIXED LOAD / UNIDENTIFIED CARGO

POTENTIAL HAZARDS

FIRE OR EXPLOSION
- May explode from heat, shock, friction or contamination.
- May react violently or explosively on contact with air, water or foam.
- May be ignited by heat, sparks or flames.
- Vapors may travel to source of ignition and flash back.
- Containers may explode when heated.
- Ruptured cylinders may rocket.

HEALTH
- Inhalation, ingestion or contact with substance may cause severe injury, infection, disease or death.
- High concentration of gas may cause asphyxiation without warning.
- Contact may cause burns to skin and eyes.
- Fire or contact with water may produce irritating, toxic and/or corrosive gases.
- Runoff from fire control may cause pollution.
PUBLIC SAFETY

- CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.
- As an immediate precautionary measure, isolate spill or leak area for at least 100 meters (330 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.

PROTECTIVE CLOTHING

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing provides limited protection in fire situations ONLY; it may not be effective in spill situations.

EVACUATION

Fire

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

EMERGENCY RESPONSE

Fire

CAUTION: Material may react with extinguishing agent.

Small Fire

- Dry chemical, CO2, water spray or regular foam.

Large Fire

- Water spray, fog or regular foam.
- Move containers from fire area if you can do it without risk.

Fire involving Tanks

- Cool containers with flooding quantities of water until well after fire is out.
- Do not get water inside containers.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.
SPILL OR LEAK
• Do not touch or walk through spilled material.
• ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
• All equipment used when handling the product must be grounded.
• Keep combustibles (wood, paper, oil, etc.) away from spilled material.
• Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.
• Prevent entry into waterways, sewers, basements or confined areas.

Small Spill
• Take up with sand or other non-combustible absorbent material and place into containers for later disposal.

Large Spill
• Dike far ahead of liquid spill for later disposal.

FIRST AID
• Move victim to fresh air.
• Call 911 or emergency medical service.
• Give artificial respiration if victim is not breathing.
• Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
• Administer oxygen if breathing is difficult.
• Remove and isolate contaminated clothing and shoes.
• In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
• Shower and wash with soap and water.
• Keep victim warm and quiet.
• Effects of exposure (inhalation, ingestion or
**WISER** is a system designed to assist emergency responders in hazardous material incidents. **WISER** provides a wide range of information on hazardous substances, including substance identification support, physical characteristics, human health information, and containment and suppression advice.

- Create Your Planning Document
- Prepare Your Team
- Search for Known Substances
- Help Identify Chemicals
- Tools (Reference material)
- Allows you to select profile’s (1st Responder, Hazmat Specialist, EMS, Hospital Provider, and Preparedness Planner)

*Mobile apps and Windows

Surry Insurance Loss Prevention Services
2015
The Wireless Information System For Emergency Responders (WISER) is created by the National Library of Medicine.

Chemical Hazards Emergency Medical Management (CHEMM) content was produced by the U.S. Department of Health and Human Services, Office of the Assistant Secretary for Preparedness and Response, Office of Planning and Emergency Operations, in cooperation with the National Library of Medicine, Division of Specialized Information Services, and many medical, emergency response, toxicology, and other types of experts.

The U.S. Government does not warrant or assume any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed.

It is not the intention of NLM to provide specific medical advice to the public, but rather to provide users with information to better understand their health.

NLM does not endorse or recommend any commercial products, process, or services.
User Profile

- 1st Responder
- Hazmat Specialist
- EMS
- Hospital Provider
- Preparedness Planner

The user profile allows WISER to customize its content to better suit your role in an emergency. This includes the tools available on the WISER home page and the content displayed when viewing WISER substances.
Prepare Your Team

- Assemble a hospital response team
- Create an emergency call list
- Acquire professional competencies
- Be prepared with supplies and equipment
- Plan for possibility of care with scarce resources
- Conduct practices, exercises, and drills
National Planning Scenarios

- National Planning Scenarios — created for use in national, federal, state, and local homeland security preparedness activities (PDF - 255 KB) (DHS/FEMA)
  - See Scenario 5: Chemical Attack - Blister Agent
  - See Scenario 6: Chemical Attack - Toxic Industrial Chemicals
  - See Scenario 7: Chemical Attack - Nerve Agent
  - See Scenario 8: Chemical Attack - Chlorine Tank Explosion

Developing and Maintaining State, Territorial, Tribal, and Local Government Emergency Plans

- See also: Strategy for Developing a Community Chemical Response Plan

Other Information

- Public Health Preparedness Tools and Resources for Planning and Response (HHS/AHRQ)
Response Planning - Key Guidance Documents

- National Response Framework
- National Planning Scenarios
- Developing and Maintaining State, Territorial, Tribal, and Local Government Emergency Plans
- Other Information
- See also: Strategy for Developing a Community Chemical Response Plan

National Response Framework

- National Response Framework (NRF)
  - NRF Resource Center
  - NRF Training Courses
  - NRF Incident Annexes
  - Emergency Support Function #8 — Public Health and Medical Services (PDF - 200 KB)
  - Catastrophic Incident Annex (PDF - 97 KB)
  - Worker Safety and Health Support Annex (PDF - 85 KB)
  - ESF #10 - Oil and Hazardous Materials Response Annex (PDF - 108 KB)
- National Preparedness Guidelines (PDF - 560 KB) (DHS, September 2007)
- National Incident Management System (NIMS)
  - NIMS related documents

National Planning Scenarios

- National Planning Scenarios — created for use in national, federal, state, and local homeland security preparedness activities (PDF - 255 KB) (DHS/FEMA)
  - See Scenario 5: Chemical Attack - Plister Agent
Prepare Your Team

- Assemble a hospital response team
- Create an emergency call list
- Acquire professional competencies
- Be prepared with supplies and equipment
- Plan for possibility of care with scarce resources
- Conduct practices, exercises, and drills
Emergency Contacts

If you are a member of the general public...

**Call 911**
If you believe you have been exposed to a hazardous agent, or if you believe an intentional threat will occur or is occurring, call 911 immediately.

---

**Critical Phone Numbers for Professionals and the General Public**

- **American Association of Poison Control Centers**
  1-800-222-1222
  *(Staffed 24/7)* phone number connects anyone in the US to their local poison center. All calls are answered by a medical professional, with the goal of providing immediate poison exposure management instructions.

- **ASPCA National Animal Poison Control Center**
  1-888-426-4435
  *(Staffed 24/7)* A fee may be charged per case. Allied with the University of Illinois College of Veterinary Medicine.

- **Centers for Disease Control / Agency for Toxic Substances Disease Registry**
  1-770-488-7100 or 1-800-232-4636
  *(Staffed 24/7)* CDC’s main emergency operations center.

- **CHEMTREC**
  1-800-424-9300
  *(Staffed 24/7)* public service hotline for emergency responders. CHEMTREC® is part of the American Chemistry Council.

- **Federal Bureau of Investigation (FBI)**
  1-202-324-3000 (Headquarters)
  Contains resources for citizens and others to prepare for and respond to a terrorist event, including victim assistance, training, incident reporting, and understanding threat levels.

- **Federal Emergency Management Agency (FEMA)**
  1-800-621-FEMA
Chemical Safety Data Sheets

• Features:
  * Fully indexed and searchable chemical list by Name, CAS# or RTECS#
  * Saved history of previously viewed chemicals
  * Email and Airprint** capability
  * No Internet connection required

*Mobil apps
<table>
<thead>
<tr>
<th>Chemical</th>
<th>CAS#</th>
<th>RTECS#</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acenaphthene</td>
<td>83-32-9</td>
<td>AB1000000</td>
</tr>
<tr>
<td>Acephate</td>
<td>30560-19-1</td>
<td>TB4760000</td>
</tr>
<tr>
<td>Acetal</td>
<td>105-57-7</td>
<td>AB2800000</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>75-07-0</td>
<td>AB1925000</td>
</tr>
<tr>
<td>P - Acetaldehyde</td>
<td>123-63-7</td>
<td>YK0525000</td>
</tr>
<tr>
<td>Acetaldehyde Diethyl Acetal</td>
<td>105-57-7</td>
<td>AB2800000</td>
</tr>
<tr>
<td>Acetamide</td>
<td>60-35-5</td>
<td>AB4025000</td>
</tr>
<tr>
<td>Acetamide, Thio -</td>
<td>62-55-5</td>
<td>AC6925000</td>
</tr>
<tr>
<td>Acetaminophen</td>
<td>103-90-2</td>
<td>AE4200000</td>
</tr>
<tr>
<td>Acetic Acid</td>
<td>64-19-7</td>
<td>AE4200000</td>
</tr>
<tr>
<td>Acetic Acid, Anhydride</td>
<td>108-24-7</td>
<td>AK1925000</td>
</tr>
<tr>
<td>Benzene</td>
<td>71-43-2</td>
<td>CY1400000</td>
</tr>
<tr>
<td>Nitrous Acid Potassium Salt</td>
<td>7758-09-0</td>
<td>TT3750000</td>
</tr>
<tr>
<td>Nitrous Acid, Isobutyl Ester</td>
<td>542-56-3</td>
<td>RA0805000</td>
</tr>
<tr>
<td>Nitrous Oxide</td>
<td>10024-97-2</td>
<td>QX1350000</td>
</tr>
<tr>
<td>Octabromodiphenyl Ether</td>
<td>32536-52-0</td>
<td>DA6626666</td>
</tr>
<tr>
<td>Phenol</td>
<td>108-95-2</td>
<td>SJ3325000</td>
</tr>
<tr>
<td>Phenol, 4 - Octyl</td>
<td>1806-26-4</td>
<td>SM5787000</td>
</tr>
</tbody>
</table>

Clear History
### ACETONE

ICSC: 0087

**2-Propanone**  
Dimethyl ketone  
Methyl ketone  
C₃H₆O / CH₃COCH₃  
Molecular mass: 58.1

<table>
<thead>
<tr>
<th>ICSC #</th>
<th>0087</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS #</td>
<td>67-64-1</td>
</tr>
<tr>
<td>RTECS #</td>
<td>AL3150000</td>
</tr>
<tr>
<td>UN #</td>
<td>1090</td>
</tr>
<tr>
<td>EC #</td>
<td>606-001-00-8</td>
</tr>
</tbody>
</table>

#### Types of Hazard/Exposure

<table>
<thead>
<tr>
<th>Exposure</th>
<th>Acute Hazards/Symptoms</th>
<th>Prevention</th>
<th>First Aid/Fire Fighting</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FIRE</strong></td>
<td>Highly flammable.</td>
<td>NO open flames, NO sparks, and NO smoking.</td>
<td>Powder, alcohol-resistant foam, water in large amounts, carbon dioxide.</td>
</tr>
<tr>
<td><strong>Explosion</strong></td>
<td>Vapour/air mixtures are explosive.</td>
<td>Closed system, ventilation, explosion-proof electrical equipment and lighting. Do NOT use compressed air for filling, discharging, or handling.</td>
<td>In case of fire: keep drums, etc., cool by spraying with water.</td>
</tr>
<tr>
<td><strong>Skin</strong></td>
<td>Dry skin.</td>
<td>Protective gloves.</td>
<td>Remove contaminated clothes. Rinse skin with plenty of water or shower.</td>
</tr>
<tr>
<td><strong>Eyes</strong></td>
<td>Redness. Pain. Blurred vision. Possible corneal damage.</td>
<td>Safety spectacles or face shield. Contact lenses should not be worn.</td>
<td>First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.</td>
</tr>
</tbody>
</table>
Lift Calculator

- Oregon OSHA’s Easy Lift app uses a modified version of the NIOSH lifting equation to give the user a maximum safe weight for various lifting scenarios.

*Mobil apps and Windows

Surry Insurance Loss Prevention Services
2015
1. Click a box that is the beginning position of the lift.

<table>
<thead>
<tr>
<th>Distance from body:</th>
<th>0&quot;</th>
<th>4&quot;</th>
<th>16&quot;</th>
<th>23&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Over head
- Top of head to 3" below shoulder
- 3" below shoulder to knuckles
- Knuckles to mid-shin
- Mid-shin to floor

Surry Insurance Loss Prevention Services 2015
2. Click a box that is the correct lifts per minute and hours per day.

<table>
<thead>
<tr>
<th>Lifts per minute</th>
<th>1 hr. or less</th>
<th>1-2 hrs.</th>
<th>2+ hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 per 2-5 min.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 per min.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-3 per min.</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>4-5 per min.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6-7 per min.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8-9 per min.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10+ per min.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3. Your lift limit is affected by the amount of twisting during lifting.

2-3 lifts every minute for 1 hour or less

Over 45 degrees

Under 45 degrees

White boxes indicate all lift areas applicable to this weight and repetition.

26 lbs. 31 lbs.

Return to start

Surry Insurance Loss Prevention Services
2015
OSHA 1910 Regulations

- This OSHA Safety App includes the full text of the OSHA regulations for General Industry and Business.
  - Contains the full text of OSHA Regulations for General Industry (Part 1910)
  - Doesn't require internet access, so it can work in remote locations.
  - Provides full access to the latest OSHA 1910 Regulations
  - Provides OSHA's official interpretations of their regulations.

*Mobil apps*
Sound Level Meter

- Decibel 10th turns your iPhone, iPad and iPod touch into a professional sound meter.
  - Display the Average, Peak and Max values with both nice and clear digital and analog layout
  - Quick reference text to help you compare with real-life examples
  - Plotted history of the Average values
  - Record and export the data to email for further analysis

*Mobil apps

Surry Insurance Loss Prevention Services
2015
iAuditor for iPhone/iPad/Android

The App that's revolutionizing workplace auditing just got better... Way better! Fully customizable workplace audits for every industry and application are now in your hands, where you need them most.

*Mobil apps and Windows

Surry Insurance Loss Prevention Services
2015
Customizable Audit Forms
You can create custom audits from scratch, reuse existing audits, and even generate and edit audits on desktop computers with a spreadsheet and simply import them into iAuditor. And if that isn't enough, you can also share audit forms within the app, across similar industries via the SafetyCulture Cloud.

Surry Insurance Loss Prevention Services
2015
Quick and easy
Yes, the entire audit process is at your fingertips ... but iAuditor can also use GPS locating for fast worksite set-up, required signatures are taken on the spot, and the entire audit can then be exported as a PDF and emailed in a beautifully formatted report.
SafetyCloud™ Integration
iAuditor now has its own cloud based management solution. Edit templates and share them with groups and individuals in your company, all in your Private and Secure desktop environment. Any connected devices are automatically backed up and synced with SafetyCloud.
Shared Template Library
A vehicle inspection for one company, is not that different to a vehicle inspection for another. And the same is true of most tasks we perform in the workplace. iAuditor's cloud sharing ability means that we no longer need to reinvent the wheel. With over 36,000 Inspection templates being shared in the public cloud workers all over the world are helping each other work smarter and safer. Of course, your sensitive information is protected and sharing of templates is optional.
Rich reports that paint the picture
Take photos when conducting your audits and iAuditor will format them seamlessly into your final report. But it now works both ways. You can import files into iAuditor for use in your forms.

Image Annotation
Take a photo of whatever it is you are auditing, then easily add arrows, diagrams, drawings or even handwriting to clearly spell out your findings.
More Features

• Scoring - Ability to score categories and individual responses.
• Weighting - Ability to place greater importance on certain categories or questions for high priority.
• Branching & Sub-categories - Ability to add unlimited sub-categories to an item.
• Dynamic Smart Fields - Ability to create actions to have question sets appear based on the responses being provided.

Up to five customized default options - Ability to customizes the standard Yes/No/NA responses.
• Template Locking - Templates can be locked with a password and not edited.
• Custom Document numbering for each device
Demonstration Time
-Over 100 Free (Or Low Cost) Safety Apps Reviewed!

http://www.safetyawakenings.com/apps/
Questions and Comments?

Randy Cranfill, MESH, CPSI, CSRM
Director of Safety and Loss Prevention
Surry Insurance
336-831-4299
randy.cranfill@surryinsurance.com

Information contained in this publication is compiled from sources believed to be reliable. Surry Insurance makes no guarantee as to, and assumes no responsibility for, the accuracy, adequacy or completeness of such information.