## **Spring 2007**

# **Oregon** HazMatters environment from fires and hazardous materials.

Welcome to the Spring Edition of Oregon **HazMatters** 

Things have been busy here! We would like to bid Dave Miller a happy retirement and welcome our two new employees: Jackie Sparks and Alec Carte. In addition to our new employees, we have changed the structure of our unit. Please see page 3 for more information.

If you would like to receive this publication electronically, please contact us at sfm.cr2k@state.or.us and request to be placed on our email distribution list. We appreciate your help in keeping our distribution list current and lowering our printing and distribution costs. We hope you enjoy this edition!



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Protecting citizens, their property and the

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## From the desk of the State Fire Marshal



#### NATURAL PROGRESSION SHOWS HOW FAR WE'VE COME

When I started with this agency 21 years ago, regional hazmat teams, incident management teams and urban search and rescue task forces weren't even dreams. Since then, changes in the complexity of incident response have given rise to the development of these specialized teams, which in the past were managed separately within OSFM.

Today, as we increase our focus on all-risk incidents and response, we realize these teams will train and work together more frequently. As a result, it's a

natural progression for OSFM to shift how we manage the teams, their resources and their training.

Previously, incident management teams and urban search & rescue task forces were managed under the administrative arm of OSFM, and hazmat teams were managed by the Hazardous Materials Services Unit. However, responding to all-risk scenarios will require 'all hands on deck.' Centralizing the management, administration and training functions under an Emergency Response Unit umbrella will go a long way to improving the coordination, communication and continuity between all units involved.

Combining the three specialized response teams into a centrally managed Emergency Response Unit will increase efficiency in purchasing, communication and logistics--ultimately delivering a more effective, coordinated response to the citizens of Oregon, local governments and the Oregon fire service. In addition, centralizing management will enhance deployment standards and call-down lists making for more timely and effective response.

The new Emergency Response Unit will be managed by Mariana Ruiz-Temple whose 12 year's experience in the Hazardous Materials unit includes three years as manager of the Hazardous Information and Planning section and the past year as manager of the Hazardous Materials Response Teams. For more information, contact Mariana at 503-373-1540 ext. 238 or email mariana.ruiztemple@state.or.us.



## WHAT'S NEW

**HazMatters** 

#### **OSFM Retirement**

#### Dave Miller CR2K Operations Manager

Dave Miller retired from OSFM on March 30, 2007, after 17 years of service in Hazmat Services, Community Right to Know (CR2K) unit.

Dave began his career with Hazmat Services in 1990, as an Auditor of the Hazardous Substance Survey program. He moved on to become the CR2K Operations Manager and had an integral part in the development and organization of CR2K, including the Hazardous Substance



Dave Miller is presented his framed badge by Col. Greg Willeford and State Fire Marshal Nancy Orr.

Information Survey (HSIS) and Electronic Survey Submission. Early on, he was involved in the development and implementation of public awareness of the HSIS program with emphasis on community involvement. He has also been active in the legislative process necessary to keep the program current. Dave's influence as a manager and leader have created a consistently unified and supportive character for the CR2K unit. Though he will be missed, we wish him the very best.

#### **OSFM New Employees**

#### Jackie Sparks Survey Processor

Sparks worked in retail for five years before beginning her state service in 2001 at the Department of Motor Vehicles Driver Suspensions and Driver Records units.



As a Survey Processor in the Office of State Fire Marshal's Community Right to Know unit she is responsible for processing, reviewing and data entry of hazardous substance information surveys.

A Salem native, Sparks enjoys all types of outdoor activities. "I'm very happy to be working here and look forward to working with a great team and accomplishing fulfilling work," says Sparks.

#### Alec Carte HazMat Information Specialist

Alec Carte began work on March 5<sup>th</sup> as our new HazMat Information Specialist. Alec comes from the

University of Oregon where she worked as an Information Technology Consultant at the Institute of Marine Biology in Charleston.

In addition, Alec has worked as a volunteer in the fire service for 16 years. She was with McKenzie Fire Department for 9 years, and most recently Lieutenant Fire Marshal with Charleston Fire Department.

"I am excited about having a career in the fire service especially with OSFM. This is a great place to work and the people are wonderful."



#### STATE HAZMAT TEAM #15 INTRODUCES THEMSELVES By Dan Crutchfield

Hazardous Material Response Team #15 is located in Coos Bay. Currently we have eleven team members and will be adding two more within the next couple months. We are in the process of selecting the two additional individuals within our response area to complete hazardous material technician training in the next year. Ten of the eleven members are career firefighters with Coos Bay Fire and one is a career firefighter with the Charleston Fire District. All members have been cross trained to perform any function at a hazardous materials incident. The average age of our team members is 37 years old.

The general response area for our team is along Hwy 101 from mile post 199 to the California border. We go inland on Hwy 38 to Scottsburg near mile post 19 and inland on Hwy 42 to the Coos and Douglas County line near mile post 45. Our response area consists of mostly narrow winding roads with waterways nearby.

Our team trains once a month for four hours. Training consists of an information update, review of two Standard Operating Guidelines, and a scenario-based training. A hazardous materials training schedule for the year is distributed to team members. The on duty team members are responsible to set up the exercise.

Potential hazards that exist in our area include chlorine tanks used at a water treatment plant, anhydrous ammonia used at ice plants in Charleston, and many other chemicals and fertilizers stored throughout the district. As with many other teams, our greatest potential for a hazardous materials incident is with the transportation industry. We have many trucks transporting hazardous material through our response area on a daily basis.

We haven't had an incident that was too challenging for us, yet. The biggest problem we've seen is getting the scene under control and having all of the responders work together. It takes a good incident commander to keep everyone working together to mitigate the scene safely and efficiently.

For questions about Hazardous Materials Response Team #15, contact: Mark Anderson, Hazardous Materias Response Team Administrator manderson@fire.coosbay.org or Dan Crutchfield, Hazardous Materials Response Team Coordinator dcrutchfield@fire.coosbay.org



Incident in the North Bend - Scottsburg area on July 8, 2006. A tanker truck hauling diesel fuel crashed. The trailer went off the road and into a tree, leaking fuel into the water below.



## **INCIDENT MANAGEMENT TEAMS**

#### **Mission Statement**

To unify, manage and ensure the safety of the public safety resources that are mobilized in a time of emergency to protect the people, property, and the environment of the state of Oregon and adjoining states.

#### Creed

No job is so important, and no service so urgent, that we cannot take time to do the job safely- - do it right the first time.

#### Vision

In April 2000, the State Fire Defense Board approved a proposal for developing a fixed incident management team for conflagration mobilizations. The proposal establishes three teams for service when needed on conflagrations. The teams are identified as the green team, the red team, and the blue team. Incident Management Teams serve on a rotation basis.

#### **Emergency Mobilization**

The Conflagration Act was established in 1940 as a civil defense measure and can be invoked only by the Governor. The Act allows the State Fire Marshal to mobilize firefighters and equipment from around the state to provide services to local jurisdictions that are overwhelmed by natural and/or manmade disasters.

#### **Incident Management Intentions**

The State Fire Marshal incident management team (IMT) will develop a plan of action to aggressively and safely mitigate the incident to which it has been assigned, either through unified command or a single incident command structure. The IMT intends to build and operate a command and control structure consistent with its ability to meet the expectations outline.



Ted Kunze and another fire fighter at the 2006 Black Crater Fire

#### **Unified Command**

A rapidly developing interface fire puts tremendous demands on the fire service, both structural and wildland. To be successful, it is imperative that both structural and wildland organizations unify quickly and effectively in order to minimize chaos, maximize effectiveness of our respective resources and consequently minimize the cost of fire suppression.



The Green Team



## **URBAN SEARCH & RESCUE**

The Office of State Fire Marshal initiated building an intermediate <sup>1</sup>Type 1 Collapse and Rescue task force for responding to a structural collapse, or threat of imminent structural collapse. Disasters both natural and human-cased have the potential to collapse buildings or other structures and trapping victims. Such an event may rapidly overwhelm the technical rescue resources of a local fire department. It takes 24 to 36 hours for a Federal FEMA team to arrive and those are the most critical hours for viable rescue of those trapped.

#### Authority to Respond

Oregon Revised Statute ORS 401.638 allows the Governor to approve mobilization of local resources for the purpose of responding to structural collapses across jurisdictional boundaries by mobilizing under the ORS 476.510 Emergency Conflagration Act .

#### **Effective Readiness**

OSFM is the sponsoring agency for OR-TF1 and provides program coordination and administrative support. We have (through Homeland Security grants) three equipment caches and 211 firefighters trained at technician level.

#### Funding

Homeland Security grants provide training and equipment for the task force.

Technical Rescue Training Technical Rescue Equipment FY 2004-2007 \$ 548,411 FY 2003-2007 \$1.1 million



**OR-TF 1 Search Specialist** 

#### Training

In 2006, task force members received Structural Collapse Rescue training and US&R Technical Search Specialist training. These classes provide necessary knowledge, skills and abilities for personnel to develop strategy and tactics to implement searches during recon and operations at structural collapse incidents.

#### Exercise

On June 4, 2006, the state Incident Management Team and US&R task force successfully completed a full-scale mock deployment exercise.

#### **Objectives:**

- Exercise call-out procedure
- · Information sharing
- · Advance team meeting
- · Briefing between IC, Advance Team and local responders

For more information contact Tina Toney at <u>tina.toney@state.or.us</u> or (503) 373-1540 x 212 or Mariana Ruiz-Temple at <u>Mariana.ruiz-temple@state.or.us</u>, or (503) 373-1540 x 238

<sup>1</sup> A Type 1 Collapse and Rescue Task Force is a type of resource. Resource typing is designed to enhance emergency readiness and response at all levels of government. Typing is a measure of minimum capabilities to perform its function. For more information on Typing go to <a href="http://www.fema.gov/emergency/nims/rm/rt.shtm">http://www.fema.gov/emergency/nims/rm/rt.shtm</a>



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## **HAZARDOUS MATERIALS INCIDENT STATISTICS FOR 2006**

The following statistics summarize the 2006 Hazardous Materials Incident Reports from emergency responders.

#### **General Incident Statistics**

Total Incidents reported:	88
State Regional HazMat Team responses:	63
Other agency responses:	164



As shown in the chart at left, residential areas were the most frequent areas of incidents reported, equating to 25 incidents, or 28%. The second most frequent area reported was commercial property, at 26%.

The number of incidents on <u>public</u> <u>roads</u> equated to 26 incidents, or 30%.

Twenty-nine percent occurred at <u>private structures</u>. These two scene typeswere also the highest in 2003, 2004, and 2005. For the fifteenth consecutive year, private roads was the least frequent scene type.



## 2007 HAZMAT TEAMS CONFERENCE "A Team Approach"

Spring 2007

A Team Approach was the theme for the first Oregon Hazardous Materials Regional Emergency Response Teams conference held May 1st through the 3<sup>rd</sup> in Sunriver, Oregon. More than 100 members from the fifteen Oregon teams were in attendance. Other attendees included members of the 102<sup>nd</sup> Civil Support Team (CST), the EPA, and the Burlington Northern Santa Fe (BNSF). Oregon State Fire Marshal Nancy Orr and Chief Deputy State Fire Marshal Randy Simpson spoke at the conference. The two nationally renowned keynote speakers were Tim Gablehouse from the Colorado Jefferson County Local Emergency Planning Committee (LEPC), and Haz Mat and terrorist awareness speaker Dr. Fred Cowie from Montana.



The Crook County Naval Junior ROTC presented the colors to begin the conference.

Attendees chose from a variety of conference training sessions. Topics included Hazardous Materials Chemistry, Handling Railroad Emergencies, Realistic Terrorism Preparedness, Radiological Emergencies, and Spill Containment on waterways. Much of the training was conducted through hands-on sessions allowing participants to apply what they learned in the class room.

The theme, *A Team Approach*, was not by accident. There are 15 Hazardous Materials Emergency Response Teams through out Oregon. Some team members have never met. Some have trained together before but not perhaps for many years. Many team members have decades of experience, while some are newer. Someday any of these teams may respond to the same incident.



Grounding/Bonding Training



EPA teaching Hazmat Teams booming techniques.



#### 2007 HAZMAT TEAMS CONFERENCE CONTINUED...

The conference provided a unique opportunity for the teams to train together, learn from each other, and develop or renew important professional relationships. But what was also a very special opportunity was for the state team members, CST members, BNSF, and the EPA to meet, learn, and train together with *a team approach*.

A highlight of the event was the awards banquet. Awards were given in the following categories: So Others Will Succeed, Behind the Scenes, Call of the Year, and two SFM Hazardous Materials Teams Appreciation.

The So Others Will Succeed award was presented to Jack McCann, Team 05 with 23 years of Haz Mat Teams experience. Other nominees included: Scott Brainard, Team 04; Matt Ennis, Team 02; Greg Fair, Team 09; Larry Burg, Team 04; Dan Crutchfield, Team15; Helge McGee, Team 04; and John Spradley, Team 04.



Award Winners: SFM HM Team Appreciation Greg Fair, Team 09 & Steve Best, Team 03

So Others Will Succeed Jack McCann, Team 09

Behind the Scenes Sue Otjen

Call of the Year Mark Truax for Team 11 The "Behind the Scenes" award was presented to Sue Otjen, Office of State Fire Marshal, who has been with the Haz Mat Teams program since 1989. Other nominees included: Tracy Fox, Team 01; Steve Best, Team 03; Larry Blumenstein, Team 13; Scott Brainard, Team 04; Steve Loftin, Team 05; and Greg Fair, Team 09.

The Call of the Year award was given to the team that responded to the most unique call during the year. Many factors were considered, such as response techniques, equipment used, material involved and accurate post incident reports. The award was presented to Mark Truax for Team 11 from Astoria for response to an Anhydrous Ammonia release in October of 2006.

Recipients of the SFM Hazardous Materials Teams Appreciation awards were Steve Best from Team 03 and Greg Fair from Team 09. Steve has been a team member since 1989 and has played a key role in making the program a success. Greg Fair has been a member of Team 9 for fifteen years and the teams training coordinator for the past five years.

Another highlight was the spectacular closing demonstration by the 102<sup>nd</sup> CST. Thanks to the U.S. Coast Guard from Astoria. Six CST members demonstrated a vertical deployment from a J-Hawk helicopter to investigate a vehicle for hazardous materials or weapons of mass destruction (WMD). After clearing the vehicle, the J-Hawk then removed the CST members from the scene.

This conference will be the first of many to come. Even before the 2007 conference was over, participants were asking when the next one would take place. Multiple compliments were received during the entire event. One member of the CST

## 2007 HAZMAT TEAMS CONFERENCE CONTINUED...

said he has been to numerous conferences around the nation and this one was one of the best.

Of course an event like this does not happen by itself. Recognition should be given to all of the participants, sponsors, and speakers who contributed. Also, special thanks to the planning committee who spent the past six months making it all happen. From the very beginning, A Team Approach made this conference a success.



CST J-Hawk Demonstration



Members of HM05 and CST playing volleyball in the Hazmat Olympics.



Did you know the OSFM has a Hazardous Substance Information System (HSIS CD) available, free of charge?! It contains facility demographic data, facility chemical data including quantity and storage, a chemical encyclopedia, help menus, a list of Oregon Fire Departments, a list of Hazard Classes, and much more.

The HSIS CD contains a pdf version of a user's manual so you can...

## **MASTER THE HSIS PROGRAM!**

- Understand CR2K
- Access the Help Files
- Sort, Search, and Filter!
- An Abundance of Tips!

Request the CD today by completing the Information Request form on our website at:

#### http://egov.oregon.gov/OSP/SFM/docs/CR2K/ Cr2k\_pdfs/Info\_Request\_Form.pdf

If you have questions about the HSIS CD, contact: Shelly Kendrick CR2K Information Assistant 503-373-1540 ext. 353 sfm.cr2k@state.or.us www.sfm.state.or.us





## CSB ISSUES FINAL REPORT ON CHLORINE RELEASE AT DPC ENTERPRISES IN GLENDALE, ARIZONA:

#### REPORT NOTES COMPANY'S LACK OF ENGINEERING SAFEGUARDS

Phoenix, Arizona, February 28, 2007 - In a final report issued today, the U.S. Chemical Safety Board (CSB) concluded that insufficient safety margins, a lack of engineering safeguards, unclear procedures and training, and an absence of published guidance were among the causes of a release of up to 1,920 pounds of chlorine from the DPC Enterprises facility in Glendale, Arizona, on November 17, 2003.

The CSB report makes 14 recommendations to the company, local municipalities, and the Chlorine Institute.



On November 17, 2003, up to 1,920 pounds of chlorine was released as vapors into the atmosphere in Glendale, AZ resulting in an evacuation covering 1.5 square miles.

CSB Board Member John Bresland said, 'Our investigation revealed several factors that led to the release. Chlorine is a highly toxic substance that needs appropriate safeguards to prevent releases and protect the public, facility personnel, and emergency responders.' On the day of the accident, excess chlorine vented to a scrubber where it completely depleted the active scrubbing material (caustic soda), over-chlorinating the scrubber. The resulting decomposition reaction vented chlorine vapors to the atmosphere. Hazardous emissions continued for about six hours and led to the medical evaluation of five residents and 11 police officers, and the evacuation of 1.5 square miles of Glendale and Phoenix.

One of the root causes determined by the CSB is that DPC's single administrative safeguard, an operating procedure, did not adequately address the risk of over- chlorinating the scrubber. CSB Lead Investigator Jim Lay said, 'It is necessary to integrate appropriate layers of protection into all processes handling hazardous chemicals. In this case, we recommended that DPC adopt safety features such as additional interlocks, automatic shutdowns, and mitigation measures to prevent the release of chlorine to the atmosphere due to over-chlorination.'

The CSB previously investigated an August 2002 incident at the DPC Enterprises facility in Festus, Missouri, that led to the release of 48,000 pounds of chlorine, causing three workers and 63 residents to seek medical treatment.

The CSB report released today makes a total of 14 safety recommendations, including the following:

- Maricopa Department of Air Quality should revise DPC's permitted operating conditions to specify minimum scrubber caustic concentration;



#### REPORT NOTES COMPANY'S LACK OF ENGINEERING SAFEGUARDS CONTINUED...

- The Glendale Fire Department and Police Department should better integrate their incident command structure, improve communication, and hold joint hazmat training exercises;
- The Chlorine Institute, a technical research and safety institute for manufacturers and distributors of chlorine, should modify its 'Chlorine Scrubbing Systems, Pamphlet 89' and other pertinent publications to address safety issues associated with overchlorination;
- DPC should modify its corporate engineering standards to require layers of protection on chlorine scrubbers at DPC facilities.

The CSB is an independent federal agency charged with investigating industrial chemical accidents. The agency's board members are appointed by the president and confirmed by the Senate. CSB investigations look into all aspects of chemical accidents, including physical causes such as: equipment failures and inadequacies in safety management systems, regulations, and industry standards.



## CAMEO SUITE- NEW VERSIONS AVAILABLE

On February 12, 2007, new versions of the CAMEO software suite were made available on the EPA/CAMEO website http:// www.epa.gov/oem/cameo/

Here is a summary of the changes:

CAMEOfm has been upgraded to version 1.2

- Updated Chemical Library with the latest TEEL values
- Minor changes to the Reactivity Report
- Macintosh version now runs on OS X

MARPLOT has been upgraded to version 3.3.3

- Minor changes and bug fixes
- Macintosh version now runs on OS X

ALOHA has been upgraded to version 5.4.1

- Updated Chemical Library with the latest TEEL values
- Minor changes and bug fixes
- Macintosh version now runs on OS X

#### CAMEO, the Website:

Did you know there's a website where you can look up information

on hazardous materials? Sure you did. How about one where you can mix chemicals together (well, at least virtually) to see what might happen? Of



course you didn't, because it just recently went 'live'! It is the chemical database part of CAMEO, but on the web. Check out : http:// cameochemicals.noaa.gov/

If you have any questions abouth these new verisions of CAMEO software, please contact Peter Gattuso of EPA at gattuso.peter@epa.gov

## WHAT CHEMICALS COULD BE A PROBLEM WHEN MIXED WITH SODIUM HYPOCHLORITE?

Since more and more plants are now using or considering using sodium hypochlorite solutions (**bleach**) as a disinfectant or treatment chemical, it is important to know what potential hazards with this chemical must be addressed. Because it comes as a liquid (aqueous solution), does not mean that the release of chlorine gas cannot occur. Steps must be taken to prevent this from happening at your plant.

Accidents have occurred when an acid or an acidic chemical was transferred into the sodium hypochlorite solution storage tank, or, conversely, sodium hypochlorite solution was transferred into a tank containing acidic chemicals.

The following are some of the more common acidic chemicals found at water and wastewater plants that can react with sodium hypochlorite:

- ferric chloride
- ferric sulfate
- ferrous sulfate
- ferrous chloride (pickle liquor)
- alum (aluminum sulfate)
- hydrochloric acid
- sulfuric acid
- phosphoric acid
- fluosilicic acid (hydrofluosilicic acid)

Depending on the concentration of the sodium hypochlorite solution, over one pound of chlorine gas could be released for each gallon of bleach that reacts. A tank truck delivering 5000 gallons of bleach into the wrong tank can cause a major release. Even a storage tank containing a few hundred gallons of bleach, if mixed with a reactive material, may cause the formation of a large amount of chlorine gas which could have an off-site impact.

In addition to acids and acidic compounds, there are a number of other materials that may be on-site that also can react with bleach in a violent or dangerous way. These are the compounds containing:

- ammonia
- ammonium hydroxide
- chlorinated amines
- organic chemicals/materials
- fuels



#### WHAT CAN YOU DO ABOUT IT?

Multiple steps need to be taken to prevent these accidents. Some suggestions you should consider are:

- Extensive operator training
- Securing/locking devices on tank loading lines
- Checklists that your operator must complete before each chemical delivery is accepted.
- Change the fittings on the loading lines to different sizes or types.
- Color coding and labeling of process lines and fittings.

Specific operators should be assigned the duty of accepting deliveries. They should be trained in the unloading process and also know the hazards of each chemical you receive. A trained operator from your site should be responsible for making sure the correct product is unloaded into the proper tank.

Blind flanges or the end caps of quick-connect fittings should be equipped with a padlock or a chain and a padlock to prevent a trucker from unloading without your supervision. Only your operator should have a key to these locks. A checklist, used during each delivery, provides an added measure of safety and can provide valuable historical information about shipments. A checklist should require your operator to confirm the name of the chemical by reviewing the shipping papers and the placarding of the truck or tank car. A checklist also can be used to confirm:

- The sample of the chemical was collected.
- Your plant's policy on the use of safety equipment was followed.
- The quantity of chemical you received agrees with the amount written on the shipping papers.

The operator should sign-off on each form after the delivery is completed. A supervisor should frequently review these forms for accuracy and completeness.

Different sizes or types of fittings on loading lines should never be the sole method of preventing accidental mixing, but they can be one part of the solution.

Color coding and clear, bold labeling should always be part of the solution.

(Source: Chlorine Institute)



## LOCAL EMERGENCY PLANNING COMMITTEES (LEPC)

The type of disaster that can affect a community is best understood by the people who live, work and play there. Depending on location, is your community vulnerable to floods, windstorms, tsunami, earthquake, or a hazardous material spill? Are the people in your community and it's leaders prepared to respond to such a disaster? What would your community do? What would you do?

In 1986, the federal government established the Emergency Planning and Community Right to Know Act (EPCRA). The intent of this law was to give citizens the right to know what types of hazardous materials are in their communities, so they can be prepared to respond if a release occurs. Part of this law provides states with the opportunity to create Local Emergency Planning Committees. The original intent was that these committees would focus on hazardous materials emergency planning and community preparedness.

As tragic as they were, recent events ranging from 9/11 to Hurricane Katrina have opened the door for LEPCs to broaden their scope to include community preparedness for all types of hazards. Understanding the value of these groups to the communities they serve, the federal government is supporting this transformation of LEPCs.



The Office of State Fire Marshal (OSFM) has created a State E

The Office of State Fire Marshal (OSFM) has created a State Emergency Response Commission Advisory Group to help Oregon communities establish LEPCs and support them in their activities. The goal is to create a comprehensive statewide system of disaster preparedness and planning beginning at the local level.

LEPC members include people from emergency management, police, fire, transportation, health, broadcast and print media, industry, community groups, colleges, and the public. Together they form a cohesive and skilled team, familiar with the local hazards that may threaten the health and security of their community.

If you would like to start an LEPC in your community, or would like more information, contact Terry Wolfe in the Emergency Planning & Response Section of the OSFM at (503) 373-1540 extension 219, or email terry.wolfe@state.or.us.

## OSFM EMERGENCY PLANNING & RESPONSE SECTION OFFERS COMMUNITY CAPABILITY ASSESSMENT PROGRAM (CCAP)

During a hazmat incident that has off-site consequences, it is critical that all emergency responders and supporting resources work together in a coordinated and seamless effort in order to mitigate the incident and bring about the best result possible. Potentially dangerous and unpredictable results can occur when responders aren't familiar with each other's plans and capabilities or when responders have not communicated their limitations and developed contingency plans. In order to perform the ideal coordinated and seamless response effort, each response agency and support resource must invest time toward pre-emergency planning and coordination with the other parties. This can only be accomplished through open communication between local and county resources that may find themselves working together to mitigate a potentially catastrophic hazmat release. In an ever busier and more complicated world, many organizations find it difficult, if not impossible, to make this investment.

As a solution to this challenge, the Office of State Fire Marshal's (OSFM) Emergency Planning & Response Section has developed CCAP. The CCAP is a systematic, three-phased approach to assist communities in evaluating and enhancing the cohesiveness of their emergency response plans. The three phases of CCAP are:



- Phase 1 Evaluate the interface between a hazmat facility and fire department
- Phase 2 Evaluate the interface between the fire department and other community response resources
- Phase 3 Evaluate the interface between the community and county/ state resources

The CCAP promotes participation of key partners within the community and surrounding area such as industry, fire departments, law enforcement, emergency medical services, hospitals, emergency managers, public works, utilities, and others to create a Community Capability Assessment Team (CCAT) to evaluate the community's emergency response plans. When gaps in the plans are identified, OSFM Hazmat staff work with the groups involved to find mutually agreeable solutions.

After the evaluation process, the CCAP provides valuable support to obtain the resources needed to enhance emergency response plans. Resource support includes administrative coordination and oversight throughout the process and assistance in identifying and submitting grants for equipment, training, and exercises. It includes facilitating the establishment of an exercise design team and assistance in conducting an exercise, facilitating plan revision, and annual follow-up and plan review.

Communities currently participating in the CCAP include Astoria, Boardman, Central Point, The Dalles, Dallas, Hermiston, Hillsboro, LaGrande, Mount Angel, Redmond, and Saint Helens.

To participate in the program or for more information, contact Terry Wolfe at (503) 373-1540 ext. 219 or email terry.wolfe@state.or.us.



## **OREGON TRI 2005 DATA RELEASE**

The Toxics Release Inventory (TRI) is a database containing detailed information on nearly 650 chemicals and chemical categories that over 23,000 industrial and federal facilities manage through disposal or other releases, and waste management for recycling, energy recovery, or treatment. This inventory was established under the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) and expanded by the Pollution Prevention Act of 1990.

For Reporting Year 2005, 23,461 facilities reported nationally to EPA's TRI Program. The table on the previous page shows Oregon TRI data. For more information on the TRI Program go to http://www.epa.gov/tri/.





## **REPORTING YEAR 2006 TRI-ME AND ONLINE TOOLS**

RY 2006 TRI-Made Easy (TRI-ME) reporting software, along with two new online assistance tools can be accessed at www.epa.gov/tri. The first new assistance tool is called the Threshold Determination Tool. This is an interactive tutorial that guides the user through a series of questions to assist in making reporting determinations. The second new assistance tool is the web-based TRI Assistance Library. Similar to the desktop TRI Assistance Library, it is now located on the web for use anywhere you may be working. You no longer need to download the tool.

TRI-MEweb Update: The TRI-MEweb team is hoping to complete a limited release version of the TRI-MEweb application for Reporting Year 2006. They have been working diligently to make this happen. Once the version is complete, stakeholders will be notified. RY 2006 TRI-ME is compatible with Internet Explorer 6 and not with Internet Explorer 7. The TRI-MEweb team is researching this issue for possible fixes. In the meantime, facilities are encouraged to revert back to Internet Explorer 6 for successful installation. If the TRI-MEweb team is able to develop a patch for this issue, all stakeholders will be notified by email.

If you have any questions regarding any of the above mentioned topics, please feel free to contact Josh Woodyard at 202-566-0738 or email Woodyard.Josh@epa.gov.



## 2005 OREGON TOXIC RELEASE INVENTORY (TRI) DATA RELEASE INFORMATION

1 0	Imper of Forms A: 106	
<b>Top Three Counties for Onsite Release</b>	Quantities (in pounds)	
Gilliam	6,112,647	
Linn	3,420,819	
Columbia	2,696,877	
Top Three Industries Reporting Onsite Releases	Quantities (in pounds)	
Paper	7,179,210	
Solvent Recovery (RCRA)	6,112,659	
Lumber	3,024,263	
Fop Three Facilities Reporting Onsite Releases for All Quantities (in pour		
Toxics		
Chemical Waste Management of the NW	6,112,647	
Boise Cascade	2,062,569	
TDY Industries (Wah Chang)	1,613,030	
Top Three Facilities Reporting Onsite Releases for	Quantities (in pounds)	
PDIS Chamical Waste Management of the NW	969 154	
Chemical waste Management of the NW	<u>202,154</u>	
Georgia Pacific West – Toledo	4,587	
Cascade Steel Rolling Mills	2,480	
Compounds for Opsite Polosso	Quantities (in grams)	
Roardman Plant (Power)	3 240	
Fort James Mill	5.245	
	1 51	
McForland Cascado Dolo & Lumbor	1.51	
McFarland Cascade Pole & Lumber	1.51 1.3437	
McFarland Cascade Pole & Lumber  **Top Three Toxics Reported for Onsite Release Methanol	1.51 1.3437 Quantities (in pounds) 6 563 187	
McFarland Cascade Pole & Lumber  **Top Three Toxics Reported for Onsite Release Methanol Ashestos	1.51 1.3437 Quantities (in pounds) 6,563,187 4 803 080	
McFarland Cascade Pole & Lumber  **Top Three Toxics Reported for Onsite Release Methanol Asbestos Nitrate Compounds	1.51 1.3437 Quantities (in pounds) 6,563,187 4,893,089 2,020,245	
McFarland Cascade Pole & Lumber         **Top Three Toxics Reported for Onsite Release         Methanol         Asbestos         Nitrate Compounds         **Top Three DPTs reported for Onsite Release	1.51         1.3437         Quantities (in pounds)         6,563,187         4,893,089         2,030,245         Quantities (in pounds)	
McFarland Cascade Pole & Lumber         **Top Three Toxics Reported for Onsite Release         Methanol         Asbestos         Nitrate Compounds         **Top Three PBTs reported for Onsite Release         Lead Compounds	1.51         1.3437         Quantities (in pounds)         6,563,187         4,893,089         2,030,245         Quantities (in pounds)         143,008	
McFarland Cascade Pole & Lumber         **Top Three Toxics Reported for Onsite Release         Methanol         Asbestos         Nitrate Compounds         **Top Three PBTs reported for Onsite Release         Lead Compounds         Polyablarinated Pinbanyla	1.51         1.3437         Quantities (in pounds)         6,563,187         4,893,089         2,030,245         Quantities (in pounds)         143,008         84,102	
McFarland Cascade Pole & Lumber         **Top Three Toxics Reported for Onsite Release         Methanol         Asbestos         Nitrate Compounds         **Top Three PBTs reported for Onsite Release         Lead Compounds         Polychlorinated Biphenyls         Delvergelia Argenetic Compounds	1.51         1.3437         Quantities (in pounds)         6,563,187         4,893,089         2,030,245         Quantities (in pounds)         143,008         84,102         27,124	
Nort James Junit         McFarland Cascade Pole & Lumber         **Top Three Toxics Reported for Onsite Release         Methanol         Asbestos         Nitrate Compounds         **Top Three PBTs reported for Onsite Release         Lead Compounds         Polychlorinated Biphenyls         Polycyclic Aromatic Compounds         **Total Diagring Reported for Onsite Release	1.51         1.3437         Quantities (in pounds)         6,563,187         4,893,089         2,030,245         Quantities (in pounds)         143,008         84,102         27,124	
McFarland Cascade Pole & Lumber         **Top Three Toxics Reported for Onsite Release         Methanol         Asbestos         Nitrate Compounds         **Top Three PBTs reported for Onsite Release         Lead Compounds         Polychlorinated Biphenyls         Polycyclic Aromatic Compounds         **Total Dioxins Reported for Onsite Release         Dioxins and Dioxin like Compounds	1.51         1.3437         Quantities (in pounds)         6,563,187         4,893,089         2,030,245         Quantities (in pounds)         143,008         84,102         27,124         Quantities (in grams)         10,2605	
McFarland Cascade Pole & Lumber         **Top Three Toxics Reported for Onsite Release         Methanol         Asbestos         Nitrate Compounds         **Top Three PBTs reported for Onsite Release         Lead Compounds         Polychlorinated Biphenyls         Polycyclic Aromatic Compounds         **Total Dioxins Reported for Onsite Release         Dioxins and Dioxin-like Compounds	1.51         1.3437         Quantities (in pounds)         6,563,187         4,893,089         2,030,245         Quantities (in pounds)         143,008         84,102         27,124         Quantities (in grams)         10.2605         Quantities (in pounds)	
McFarland Cascade Pole & Lumber         **Top Three Toxics Reported for Onsite Release         Methanol         Asbestos         Nitrate Compounds         **Top Three PBTs reported for Onsite Release         Lead Compounds         Polychlorinated Biphenyls         Polycyclic Aromatic Compounds         **Total Dioxins Reported for Onsite Release         Dioxins and Dioxin-like Compounds         Top Facilities for Pollution Prevention Activities         Pacycling         Poster	1.51         1.3437         Quantities (in pounds)         6,563,187         4,893,089         2,030,245         Quantities (in pounds)         143,008         84,102         27,124         Quantities (in grams)         10.2605         Quantities (in pounds)         17,593,000	
McFarland Cascade Pole & Lumber         **Top Three Toxics Reported for Onsite Release         Methanol         Asbestos         Nitrate Compounds         **Top Three PBTs reported for Onsite Release         Lead Compounds         Polychlorinated Biphenyls         Polycyclic Aromatic Compounds         **Total Dioxins Reported for Onsite Release         Dioxins and Dioxin-like Compounds         Top Facilities for Pollution Prevention Activities         Recycling – On site - TDY Industries (Wah Chang)         Recycling – Off site – Johnson Controls Battery Crown	1.51         1.3437         Quantities (in pounds)         6,563,187         4,893,089         2,030,245         Quantities (in pounds)         143,008         84,102         27,124         Quantities (in grams)         10.2605         Quantities (in pounds)         17,593,000         2 774,070	
McFarland Cascade Pole & Lumber         **Top Three Toxics Reported for Onsite Release         Methanol         Asbestos         Nitrate Compounds         **Top Three PBTs reported for Onsite Release         Lead Compounds         Polychlorinated Biphenyls         Polycyclic Aromatic Compounds         **Total Dioxins Reported for Onsite Release         Dioxins and Dioxin-like Compounds         Top Facilities for Pollution Prevention Activities         Recycling – On site - TDY Industries (Wah Chang)         Recycling – Off site – Johnson Controls Battery Group         Fnergy Recovery – On Site – Weverbaeuser Springfield	1.51         1.3437         Quantities (in pounds)         6,563,187         4,893,089         2,030,245         Quantities (in pounds)         143,008         84,102         27,124         Quantities (in grams)         10.2605         Quantities (in pounds)         17,593,000         2,774,070         3 844 100	

\*\*Find more information at www.www.epa.gov/tri or call the toll-free Emergency Planning and Community Right-to-Know (EPCRA) Call Center at 1-800-424-9346, or email tri.us@epa.gov.



#### THE TROUBLE WITH ETHANOL -GAS ADDITIVE POSES SPECIAL RISKS BY DAVID WHITE, published by Industrial Fire World magazine

Ethanol is here to stay. Environmental types insist that it will help keep our water and air clean. Government leaders trumpet its glories as a renewable energy source and a hedge against rising fuel prices. Farmers love it for obvious reasons —subsidies. Now that the leadership in Congress is in new hands, it seems likely that efforts to increase production incentives for ethanol will hasten in the near term.

Once again, sweeping changes are afoot and the fire service is the last to be asked for an opinion. Remember Halon? Likewise, firefighters have been left out of the debate about ethanol. It presents some serious problems for emergency responders. Techniques and resources that have proved effective against hydrocarbon fuel fires such as gasoline will simply not work when applied to a polar solvent such as ethanol. It's as simple as Chemistry 101. This has yet to register with the proponents of putting corn squeezin's in your gas tank.

#### WHAT IS ETHANOL?

Ethanol is known by many names. To chemists, it is ethyl alcohol or grain alcohol, made by fermenting almost any material that contains starch or sugar. As such, it has always been in demand. Connoisseurs of mountain-made bootleg liquor will know it best as moonshine, white lightning, hooch, fire water



A captured moonshine still from the John C. and Olive Campell Collection; Southern Historical Collection, University of North Carolina or old stump hole. Ethanol weighs in with a 190 proof wallop.

Be warned – ethanol made to be used as a fuel is automatically denatured by adding a small amount of gasoline to it, making it unfit for drinking.

About two billion gallons of ethanol are produced annually in the U.S. A bushel of corn



processed yields 2.5 to 2.7 gallons of ethanol and various bi-products. The addition of as little as 10% ethanol to gasoline increases a gasoline's octane by 3 points, which means increased performance. Moreover, ethanol's increased oxygen content ensures that the gasoline burns more completely, thus reducing tailpipe emissions, especially harmful carbon monoxide.

Use of ethanol as a fuel additive is hardly new. During the energy crisis of the 1970s gasoline containing ethanol was marketed as "gasohol." As far back as the late 1800s, ethanol was widely used as lamp fuel. Today, ethanol is already routinely added to gasoline in New York, Connecticut, California and the Midwest, and makes up about a third of the gas sold in the U.S.



#### THE TROUBLE WITH ETHANOL -GAS ADDITIVE POSES SPECIAL RISKS CONTINUED ...

Ethanol's new demand stems largely from the decision of many states to stop allowing methyl tertiary butyl ether (MTBE) to be used as an additive in gasoline. MTBE, which can contaminate ground water, makes up about 10 percent of every gallon of gasoline with which it is blended. More than 200,000 barrels of MTBE are consumed per day in the U.S. As per toxicity alone, MTBE is not classified as a hazard for the environment. But because it acts as an emulsifier, MTBE increases the solubility of other harmful components of gasoline, such as the known carcinogen benzene. Plus, even in small quantities, it makes water taste bad.



Unlike MTBE, ethanol reportedly does not pollute ground water. Ethanol blends reduce carbon monoxide emissions, making it beneficial in parts of the U.S. that exceed EPA air quality standards, particularly in winter months.

As fuel, ethanol is primarily used in two forms. E-10 is a blend of 10 percent ethanol with 90 percent unleaded gasoline. In this form it can be used in any vehicle. E-85 is 85 percent ethanol blended with 15 percent unleaded gasoline. In this form it can only be used in specially built vehicles. This means that ethanol can be found in quantities of 10 to 85 percent in gas pumps and 95 percent pure with five percent gasoline added in rail cars, tank trucks and barges.

The U.S. EPA's newly established Renewable Fuel Standard requires nearly three percent of gasoline sold this year to be produced from renewable fuels such as ethanol, with a doubling by 2012.

Please note – because ethanol absorbs water it is highly corrosive to steel, meaning it cannot be put into steel pipelines. It is estimated that if 10 percent of ethanol was blended with every gallon of gasoline used in the U.S., it would put about 4,000 truckloads of pure ethanol on the road every day.

#### ETHANOL ON FIRE

Whether blended with gasoline or not, ethanol is highly flammable. Ethanol burns different from gasoline. On the bright side, it is an almost smokeless fire. Unlike alcohol, it has a red visible flame. On the not so bright side, pure ethanol has a flash point of only 55 degrees F. Add 15 percent water and the flashpoint rises to 68 degrees F. Diluted down to a 24 percent solution, ethanol has a flash point of 97 degrees F, so it is still flammable.

At 10 percent, ethanol is still combustible. That means that if you had a spill involving a 100,000 gallon tanker you could dilute it with as much as 900,000 gallons of water and still have a fire hazard. Good luck finding that kind of water. Other than a small spill on the highway, diluting ethanol is out. Picking up that small spill with absorbent materials designed for hydrocarbon is likely to be difficult too. The ethanol may be left behind as if it were water.



Dealing with ethanol on fire involves using an ATC (alcohol type concentrate) foam specifically designed for polar solvents. Straight AFFF and protein foam will not work. A fire department with an



#### THE TROUBLE WITH ETHANOL -GAS ADDITIVE POSES SPECIAL RISKS CONTINUED ...

extensive stockpile of the wrong kind of foam would be on the same footing as the poorest rural VFD equipped with no more than fire axes and good intentions.

Even with the right kind of foam, fighting a polar solvent fire is no cake walk. I remember a burning 160-foot diameter storage tank in Texas City. Even with a foam blanket six to eight feet deep, flames were still visible. It took four days to bring that one under control.

How much ATC foam will you need in addition to your standard stockpile? Using ATC on an ethanol fire will require double to four times the

**4**X

amount of foam used to extinguish a gasoline fire of the same size. That makes it not only a matter of expense but logistics. Fixed systems for loading racks and storage tanks may have to

be converted to handle alcohol resistant foam. Further complicating the issue is the lack of a standard application rate for ATC. Some brands are .25 gpm, some are .3 gpm and so on. The only way to be sure is to check with the foam manufacturer.

Forget about bioremediation, fire foam that degrades harmful or hazardous materials into less harmful or benign components. Ethanol kills the bugs that eat the bad stuff.

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How 'green' is this new environmental wonder fuel? Is it a hazardous material? Is it a biodegradable waste? I have not gotten a straight answer on that yet. MTBE was originally embraced as a gasoline additive as having a benign impact on local air quality. With the problems that developed later, it would seem a hard look at this aspect of ethanol is in order. Yet, I know of one 2,000 gallon spill of ethanol where the environmental agency advised responders to just wash it down the stream. Nothing is that safe anymore.

If it does accidentally flow into a waterway, there is no effective way of collecting it either. Stretching a boom across a river might catch gasoline on the surface, but ethanol dilutes in water, remember.

If the ethanol is ignited, the track record of extinguishing large quantities of it is not real good. The most recent incident of note was in October when 23 cars of an 86-car train derailed in New Brighton, PA.



October 22nd, 2006 – <u>Massive rail cleanup in New Brighton</u>: Investigation begins into derailment of 23 Norfolk Southern tankers carrying ethanol.

> Photo by Dennis B. Roddy – Pittsburg Post-Gazette



#### THE TROUBLE WITH ETHANOL -GAS ADDITIVE POSES SPECIAL RISKS CONTINUED ...

#### Conclusion

Among the burning wreckage were nine cars of ethanol. Since 2000, there have been at least 26 major fires in the U.S. involving polar solvents, of which 14 were ethanol plant fires and three were ethanol tanker fires. In addition there have been six train derailments, five with fires. Polar solvent tank fires have been reported in Sydney, Australia; Bayonne, N.J. and Texas City, TX. In almost every case, those tanks burned to the ground.

Industrial firefighters and their municipal fire fighting partners need to take a long, hard look at their ability to deal with burning ethanol. About 3.6 billion gallons of ethanol were produced last year in the United States. Events such as New Brighton show that although ethanol is still a relatively small percentage of the fuel used in the U.S., that percentage is growing. The chance of firefighters encountering an ethanol fire is increasing every day. Firefighters will have to be increasingly savvy about the peculiarities of this additive to protect themselves and others. With the right foam in the right system and the right training, we may learn to deal with ethanol as just another typical work day challenge.

#### HSIS ON-SITE INSPECTIONS -- WHAT TO EXPECT

In 1985 the Oregon Legislature passed the Oregon Community Right to Know and Protection Act. This law mandates the Office of State Fire Marshal (OSFM) to survey both business and government facilities in Oregon once a year for hazardous substance information. The responsibility of administering this law lies with the Community Right to Know (CR2K) unit which is part of the Emergency Response & Planning Section at the OSFM.

This survey is called the Hazardous Substance Information Survey (HSIS) and requires facilities to

provide information regarding hazardous substances at their sites. Some of the information to be reported is the name and hazardous ingredient of substances, the average and maximum amounts on site during the previous twelve months, as well as the storage location of the substances.

CR2K staff helps facilities stay in compliance with reporting requirements and ensures accurate information by performing audits. These audits are conducted by phone or by on-site inspection. Prior to an on-site audit, the compliance specialist may or may not contact the facility in advance.



An on-site audit in progress.





## HSIS ON SITE INSPECTIONS – WHAT TO EXPECT CONTINUED ...

#### So what can you expect if a CR2K Compliance Specialist (CS) arrives at your facility?

The first thing to take place, after the CS provides identification, is a brief opening conference with the facility representative. During this conference the CS explains the purpose of the audit, the definition of a hazardous substance, what quantities are reportable on the survey, the possible outcomes of the audit, and the process to conduct the audit. Facility representatives are welcome to ask any questions.



Once the opening conference is completed, the CS asks the representative to complete a walk-through of the entire site with them. During the walk-through the CS usually requests to view all areas and buildings at the site.

When the walk-through of the site is completed, a closing conference is held. The findings and the likely results of the audit are explained to the facility representative.

If updates or corrections to the survey are needed, the CS will update the survey with the representative's assistance. To ensure correct reporting, the CS may request to see or be provided with copies of documentation to substantiate the amounts of substances at the site. Examples include purchase records, inventory records, or invoices. Again, the CS will be happy to field any questions throughout this process.

Whenever the CR2K unit conducts an audit, the goal is to ensure accurate reporting of hazardous substances at a facility's site and to ensurue the facility is in compliance with the Oregon Community Right to Know and Protection Act upon conclusion of the audit.

These are critical components to the success of many emergency preplanning activities taking place every day in Oregon by a multitude of agencies, organizations and groups. Accurate reporting is equally important during an incident to help emergency responders take appropriate actions to minimize loss during an emergency.

For assistance in completing the survey, call our hotline at 503-378-6835 Monday through Friday 8:00 am to 12:00 pm and 1:00 pm to 5:00 pm.





#### DHS ISSUES ANTI-TERRORISM STANDARDS FOR CHEMICAL FACILITIES

In a regulation which may affect as many as a quarter of a million facilities nationwide, the Department of Homeland Security (DHS) will begin requiring vulnerability assessment and security planning for locations that store hazardous chemicals. Inclusion under the regulation is dependent upon the type and amount of chemicals stored. Chemicals included are such common substances as propane, acetone, chlorine, ammonia, ammonium nitrate and many pesticides. The thresholds for inclusion are generally lower than other regulatory programs – including EPCRA.

Covered facilities will be grouped into tiers depending on risk potential. Higher tier facilities will have more stringent performancebased security requirements. The regulatory process includes extensive security vulnerability assessment, security planning, exercises and record keeping. This includes selecting, developing and implementing measures such as



securing the facility perimeter, restricting site access, employee background checks, theft prevention, cyber security, response and emergency planning & training, as well as monitoring/ warning activities. While there are exemptions for public water and wastewater systems along with federal facilities, large numbers of facilities that have not previously been regulated will be included in this process. LEPCs can perform a critical role in alerting facilities of these new requirements. As specifics of this regulation become clearer, the state and the National Association of SARA Title Three Program Officials (NASTTPO) expects to provide compliance assistance to covered facilities.

All locations storing chemicals should be aware of this new regulation and begin preparing now to address security concerns. Don't assume that your location will not be covered; if you store chemicals this regulation will probably apply to you. The world has changed. The days of unlocked gates, lax training programs, on the fly emergency response and assuming 'it can't happen here' have passed. Chemical security assessment and planning is today's reality. Now is the time to begin preparing for these new concerns.



#### 2007 ANNUAL NASTTPO MEETING

The 2007 Annual National Association of SARA Title Three Program Officials (NASTTPO) was held the week of April 16<sup>th</sup> in Kansas City, Missouri. Charles Rogoff, Director of DOT's HMEP grants program was on hand to assist grant managers on the coming year's application. In addition, Mr. Rogoff provided an update on the current status of the HMEP grant program including the possibility of increased funding in the future.

Program updates were given by EPA and DHS representatives. Issues concerning NIMS compliance of LEPCs was discussed as well. State and Tribal representatives had the opportunity to network and discuss problems as well as solutions to concerns about training, emergency planning and reporting. Ideas for revitalizing LEPC participation were presented. An overview of the response to the Chem Central fire in Kansas City was presented by all the agencies that participated in the emergency operations for the fire.

New officers for the association were elected. The new leadership consists of Tim Gablehouse, LEPC Chairman for Jefferson County, Colorado, and Mariana Ruiz-Temple, Emergency Response Unit Manager for the Oregon State Fire Marshal.



The new administration laid out key goals for the organization. These included improved information sharing to allow members to anticipate trends that could affect them and their agencies. Another key goal is to become more active as an association on the policy and political fronts. By becoming more visible to agencies such as DOT, EPA, DHS as well as elected leaders, NASTTPO will become an active participant in the policy and legislative/ regulatory development process. The organization will be soliciting views from members and communicating those to the appropriate agencies and leaders. NASTTPO is the representative of individuals who believe in the value of emergency planning, training, accident prevention and community right-to-know.

## **Health Hazards of Chlorine**

Ed. note: The following is an excerpt from the Clorine Institute Inc Web site, section *About Chlorine*.

Chlorine gas is primarily a respiratory irritant. In sufficient concentration, the gas irritates the mucous membranes, the respiratory tract and the eyes. In extreme cases difficulty in breathing may increase to the point where death can occur from respiratory collapse or lung failure. The characteristic, penetrating odor of chlorine gas usually gives warning warning of its presence in the air.

Also at high concentrations, it is visible as a greenish yellow gas. Liquid chlorine in contact with skin or eyes will cause chemical burns and/ or frostbite.

For more information, visit the Chlorine Institute Inc. website at:

http://www.chlorineinstitute.org/aboutchlorine/ content.cfm?itemnumber=857&snItemNumber=858

## JUST ASKING ...

#### WHAT IN THE WORLD IS AN ORGANIC PEROXIDE?

Organic peroxides are compounds that are very useful in the industrial world. They also tend to be explosive, volatile, and highly flammable when in contact with combustible materials. Organic peroxides contain a peroxide functional group which consists of two oxygen atoms joined together. This O-O bond breaks easily and is what makes an organic peroxide useful as a catalyst. However, that same characteristic makes them a dangerous fire and explosion risk.

Organic peroxides are found as solids, liquids, or pastes. They can be diluted which makes them less likely to explode and safer to manufacture, handle, and store. Organic peroxides are light sensitive and should be stored in a dark area.

Organic peroxides are used by many industries as accelerators, catalysts, activators, oxidizing agents, hardeners, and bleaching agents. Benzoyl peroxide is an organic peroxide that is used as a topical medication for treating acne. Other examples of organic peroxides include: methyl ethyl ketone peroxide, acetone peroxide, and cumene hydroperoxide.

There are 62 businesses in Oregon reporting organic peroxides on the Hazardous Substance Information Survey. Most of these businesses use the chemical in manufacturing. The trade





names vary but the most common hazardous ingredient is methyl ethyl ketone peroxide.

It is important to note that organic peroxides can be unintentionally created if the right conditions exist. Peroxides can form spontaneously in some materials, referred to as peroxide forming materials. TRI-MEweb team Many liquid ethers can form extremely unstable ether hydroperoxides and peroxides in the presence of air, light, and metal. It is therefore recommended that these ethers be stored over potassium hydroxide which destroys peroxides and acts as a drying agent. Another way in which organic peroxides can be accidentally created is by mixing ketone solvents (commonly acetone) with waste materials that contain hydrogen peroxide or other oxidizers and leaving the mixture standing for several hours.

These are just a few of the issues to be aware of regarding organic peroxides. It is obvious that care must be exercised to safely work with these types of chemicals. It is important to be informed about the hazards they pose. The following sources provide more information about organic peroxides:

- http://www.plasticsindustry.org/ about/organicperoxide.htm
- http://www.ccohs.ca/oshanswers/ chemicals/organic/organic\_peroxide.html
- NFPA 432 Code for the Storage of Organic Peroxide Formulations
- 2003 International Fire Code Chapter 39: Organic Peroxides
- Product Material Safety Data Sheets

Ed. note: Pictures on this page are from http:// www.ilpi.com/msds/ref/peroxide.html; used with permission. The crystals formed on these bottles are highly exlosive.



#### COMMUNITY RIGHT TO KNOW (CR2K) HSIS STATISTICS FOR 2006

The following statistics reflect data from the 2006 Hazardous Substance Information Survey (HSIS), which were sent out monthly beginning in February 2006 and ending in October 2006. The monthly



distribution of surveys is primarily based on the county location of the facility.

> On average, 396 facilities were added to the Hazardous Substance Information System each month. Some of the ways new facilities are identified include: State Employment Division, Fire Departments, Facilities (self-initiated or referring another facility), OSFM Cardlock Program, and CR2K Auditors.





#### HSIS STATISTICS FOR 2006

CONTINUED...



#### Number of facilities who:

Were mailed the Hazardous Substance Information Survey: 55,759

Reported hazardous substances: 19,466

Reported Extremely Hazardous Substances (EHS): 1,629

Were assessed a Hazardous Substance Possession Fee: 6,463

**Total number of chemicals in chemical database:** 38,590

**Total number of MSDSs in computer system:** 21,608

**Total number of HSIS CD customers:** 746



Public: 227

**Emergency Responders: 519** 

For more information contact: Shelly Kendrick Information Assistant Office of State Fire Marshal Community Right To Know 4760 Portland Rd. NE, Salem, Oregon 97305-1760 Phone: (503) 378-6835 Fax: (503) 373-1825 e-mail: <u>sfm.cr2k@state.or.us</u> Web: www.sfm.state.or.us



#### **Office of State Fire Marshal Oregon State Police** 4760 Portland Rd NE Salem, OR 97305 (503) 373-1540

	<u>June</u> :			
Events	<b>Risk Management Program (RMP) Training</b> June 26-28, 2007 (one-day training) Contact: 206-553-2585 or consolacion.rogelio@epa.gov	Richland, WA		
	<u>July</u> :			
	<b>TAG/TTAC</b> July 10-11, 2007	Coos Bay, OR		
	<b>Department of Homeland Security - Grant Program Application Due Date</b> July 16, 2007			
	<u>August</u> :			
ng	CAMEO August 15-17, 2007	Salem, OR		
III	<u>September</u> :			
OI	<b>The Continuing Challenge</b> September 4-7, 2007	Sacramento, CA		
Ŭ Ŭ	<u>November</u> :			
Ut	HazMat Explo November 5-8, 2007	Las Vegas, NV		
	December:			
	<b>Emergency Preparedness and Prevention &amp; HazMat Spills Conference</b> December 2-5, 2007	Pittsburg, PA		
	* US&R meetings are held on the 4 <sup>th</sup> Tuesday of every month in Salem, Oregon *LEPC meetings may be starting in your area. For more information, contact terry.wolfe@state			