Winter 2007

Oregon HazMatters

Protecting citizens, their property and the environment from fires and hazardous materials.

OSFM Mission Statement

Welcome....

As the manager of the Office of State Fire Marshal's Hazardous Materials Services Unit, I'd like to take this opportunity to welcome you to the first edition of the HazMatters quarterly newsletter. The newsletter will not only provide information on the activities taking place in the wide variety of programs we are responsible for. It will provide a forum for us to let you know what's happening in the hazardous materials communities state wide and nationally. We welcome your comments and suggestions for future articles. If you have suggestions or would like to be a guest contributor, please contact Jamie Kometz at Jamie.Kometz@state.or.us

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Inside this issue...

HAZARDOUS MATERIALS SERVICES UNIT

Imagine there's a hazardous materials spill near your home or you discover the new business across the street is a chemical manufacturer. Who do you call for help or information? Your local fire department will definitely have helpful information. But one thing is clear, when dealing with chemicals - time may mean the difference between life and death.
The Office of State Fire Marshal (OSFM) Hazardous Materials Services Unit offers hazardous material information, fifteen highly trained regional hazardous materials response teams, community emergency planning and education.

How Do They Do That

As you might suspect, it all starts with information. In 1985, the Oregon legislature passed the Community Right To Know (CR2K) and Protection Act. The law requires OSFM to develop and distribute annual Hazardous Substance Information Surveys (HSIS) and enforce reporting requirements. Funding is provided through the hazardous substance possession fee.

Facilities are surveyed for basic demographic and emergency response information, hazardous substances and storage locations. A four-member processing staff surveys more than 50,000 facilities annually during a nine month calendar year. The results? Over 38,000 unique substances are being reported. Information received on the survey is the foundation of the CR2K program. Interested in viewing the Hazardous Substance Information System and more? Check out our website at http://egov.oregon.gov/OSP/SFM/CR2K_Databases_Intro.shtml.

Enforcement of the program is implemented by five compliance specialists and an environmental specialist. The specialists assist in resolving complex reporting issues and provide interpretation and application of the CR2K Act. They are also responsible for conducting on-site audits of facilities. When applicable, a compliance specialist may also issue Notices of Noncompliance and Penalty Assessments. Their source of information? An updated survey database. Compliance Specialists are available for assistance to facilities via the Hazardous Substance Information Hotline (503-378-6835) during business hours, Monday through Friday 8:00 AM to 5:00 PM closed for lunch from 12:00-1:00.

Information Made Easy

In the age of information, with the internet at our fingertips, more information is available than ever before. Although things are changing quickly, the OSFM presses onward to keep in step. Web-sites, compact disks, mail-outs, and special programs keep OSFM in touch with emergency responders and the citizens of Oregon. Information is not just constantly available; it is continually updated and provided through several medias.

HSIS CD - Each month, the updated survey information is distributed on CD with queries to analyze information. The CD's are distributed to fire departments, emergency responders and the 15 Regional Hazardous Materials Response Teams. Information requesters such as libraries, hospitals and law enforcement all receive updated public copies. To view the searchable database information online go to: http://www.sfm.state.or.us/CR2K/Database_Search.html. At the website, select HSIS database or hazmat incident reports. There is a third searchable database distributed on DVD, for Material Safety Data Sheets (MSDS). Not familiar with or never heard of an MSDS? You might be surprised to know the Occupational Safety and Health Administration (OSHA) requires an MSDS to be prepared for most hazardous substances used, stored or transported. The public can use MSDS information to determine chemical composition, health hazards, first aid measures and numerous safety facts.

Information Requests: An additional service is customized information queries. Research is conducted to provide a complete review of the information topic requested. To accomplish this type of research, a hazmat information request must be completed. The requests are mailed or faxed to the OSFM. Interested in making an information request? The request form and instructions may be found at the OSFM website:

HAZARDOUS MATERIALS SERVICES UNIT continued

http://egov.oregon.gov/OSP/SFM/docs/CR2K/Cr2k_pdfs/Info_Request_Form.pdf.
Persons who request information most frequently are fire service personnel, environmental consultants and other government agencies.

Offense – Then Defense

In 1989, the Oregon Legislature authorized the Office of State Fire Marshal to establish a statewide hazardous materials emergency response system. Oregon was the first state in the nation to respond to the hazardous materials emergency response crisis created by the new federal standard with a statewide hazardous materials emergency response system. To date, Oregon is one of the few who have been able to establish and maintain a program of this type.

The program is a partnership with local government, industry, and the Office of State Fire Marshal.
Local government provides:

- Trained Personnel – available to respond

Industry provides:

- Program funding – Petroleum Load Fee

The Office of State Fire Marshal provides:

- Funds for specialized training and equipment
- Cost Recovery
- Program Administration

There are fifteen teams strategically located statewide to provide a maximum 2-hour response time. Response times in most areas of the state meet or exceed that goal. In several team locations multiple jurisdictions have partnered together to provide response.
The teams are made up of volunteer and career firefighters, law enforcement, and public works employees. The diverse membership allows teams to develop areas of response expertise to respond to hazards in their response areas.

Technician training in the State of Oregon is standardized so all team members responding in the state have received the same base training. Team members complete annual refresher training as well as attend seminars, conferences and courses nationwide for advanced training. We also assist teams in bringing advanced training to their locations so the entire team can attend. The classes include Chemistry, HazCat, and Clandestine Lab training. These classes are often available to other agencies and industry in the team's response area if space is available as an opportunity for outreach training.
http://egov.oregon.gov/OSP/SFM/Regional_HazMat_Emergency_Teams.shtml

Planning and Training Assistance (PATA)

One of the outreach programs of the Hazardous Materials Services Unit is dedicated to Planning and Training Assistance (PATA). The PATA program provides planning and training tailored to fit the needs of an individual agency or facility. The PATA program includes: HSIS CD training, other tools and training for hazardous materials emergency planning and response, grant assistance, and the Community Capability Assessment Program.

Community Capability Assessment Program (CCAP)

The Community Capability Assessment Program (CCAP) is involved with communities and facilities using hazardous chemicals. CCAP is a systematic, three-phased approach to assist communities in evaluating and enhancing emergency response plans. It also promotes participation of partners within the community and surrounding areas. After assessment, CCAP provides support to communities and facilities to get the resources needed to enhance emergency response plans.

There you have it – HazMat Services.
Inform, plan, train and respond.
We take your safety seriously.

HOW DO YOU ACTIVATE A REGIONAL HAZARDOUS MATERIALS RESPONSE TEAM

In the event of a hazardous material incident, the local first responder (fire or police) will arrive on scene and size up the incident. If they determine the incident is beyond their level of training and equipment, the incident commander will request the activation of a regional hazardous materials response team through the Oregon Emergency Response System (OERS), 1-800-452-0311. OERS will contact the OSFM duty officer and other appropriate agencies. Many fire departments have developed close working relationships with their regional teams and may contact them directly to request a response. Even if they contact the team directly, the local responder will still need to contact OERS so that other appropriate notifications are made. A full team may not respond in every instance. The system provides for a tiered response ranging from providing technical advice over the phone, to on-site recon, to a full team response. All teams are authorized to respond to incidents meeting state response criteria without prior authorization from the OSFM duty officer.

When a regional hazardous materials response Team arrives on scene, they provide technical resources to the incident commander. The local first responder retains incident command. If the incident is large enough to require a unified command, the regional hazardous materials response team leader will become part of that structure. Regional hazardous materials response teams are responsible for mitigating and containing incidents but are not involved in clean up operations. Once the situation is stable the Department of Environmental Quality works with the responsible party to ensure cleanup of the hazardous materials.

OSFM DEVELOPS SYSTEM TO INTEGRATE HSIS INTO CAMEO

For the last 20 years, the Computer-Aided Management of Emergency Operations (CAMEO) Suite has been available to assist emergency responders and planners with hazardous material planning. The suite includes four software applications: 1) CAMEO is a chemical database, 2) ALOHA is an air dispersion model, 3) MARPLOT is a map viewer program, and 4) LANDVIEW is a source of maps. The CAMEO Suite provides emergency planners and responders with tools for developing incident scenarios in order to better prepare communities for chemical emergencies. These are free downloadable programs available from the Environmental Protection Agency (EPA) website at http://www.epa.gov/ceppo/cameo/.

OSFM provides free data files which can be imported directly into the CAMEO software. The data comes from the Hazardous Substance Information Survey (HSIS) and is distributed to hazardous materials response teams bi-annually. Emergency responders and planners may request the HSIS-CAMEO data files from OSFM. The files can be customized to include facility information by hazardous materials response teams jurisdiction, fire district, or county.

In addition, OSFM recently purchased Geographic Information System (GIS) software which will provide correct latitude/longitude codes. Once the correct lat/long codes are incorporated into the HSIS database, updated HSIS-CAMEO data files will be distributed to the hazardous materials response teams. The teams will then be able to use CAMEO in conjunction with the MARPLOT mapping system.

For more information about CAMEO, GIS, or the HSIS-CAMEO data files, please contact Shelly Kendrick, Community Right To Know (CR2K) Information Assistant, at 503-373-1540 ext. 353, or email sfm.cr2k@state.or.us, you can also visit the OSFM website at http://egov.oregon.gov/OSP/SFM/.

EMERGENCY PLANNING AND COMMUNITY RIGHT TO KNOW ACT TURNS 20

In the early hours of December 3, 1984, a hazmat incident half way across the world set in motion a new era of hazmat awareness, response, planning and preparedness in the United States. On that morning in Bhopal India a release of methyl isocyanate (MIC) gas leaked from a Union Carbide plant impacting the surrounding community while they slept. The result of the world's worst hazmat disaster was thousands of deaths and tens of thousands of adults and children left with life long disabilities.

As a result of this incident and another less severe in West Virginia, Congress passed the Emergency Planning and Community Right to Know Act (EPCRA) on October 17, 1986. The main goals of this law are: To facilitate and promote planning for chemical emergencies at the state and local levels, and to provide information to the public, emergency responders and planners on chemicals used, stored and released in their communities.

October 2006 was the 20th anniversary of the EPCRA. So what has been the effect of EPCRA over the past 20 years? Obvious results include; increased awareness of hazmat incident response, greater emphasis on hazmat planning, closer collaboration between emergency planners, responders and industry as well as an increase in the number and training level of hazmat response teams. The law provides an avenue for anyone with a role in hazmat to work together to create communities that are safer and more prepared for hazmat emergencies. EPCRA is still evolving. Some regulations need refining; clarification of some policies is needed; expansion of Local Emergency Planning Committee (LEPC) realms of interest needs to take place; and continued gratitude to those who volunteer and work towards the purpose of EPCRA. To commemorate the 20 years of EPCRA the Arizona State Emergency Response Commission (AZSERC) held a three day meeting that brought together EPCRA representatives from the nation. In attendance where state EPCRA representatives, Military, LEPC Reps, FEMA, EPA and DOT to mention a few. For more information on the commemoration go to http://www.azserc.org/ACE_Site/default.htm.

Pictured:
Left to Right, Dan Roe, AZSERC, Executive Director; Thomas J Barrett, Pipeline and Hazardous Materials Safety Administration, DOT Administrator; Carole L. Cameron, Deputy Director NIMS Integration Center, DHS; Charles Rogoff, HMEP Grants Manager, DOT; Timothy Gablehouse, JeffCo LEPC Chair, Colorado; Bob Dopp MERC Executive Director; Jerry Godreau NASTTPO past president

MY HAZARDOUS MATERIAL OR YOURS

By Michael Eyer

I've been a hazmat responder and regulator for over 30 years; I headed up the organization of North American transportation inspectors and shippers for 3 years; I've written the professional society's textbook chapter on the transportation of hazardous materials. Have I learned anything in that time and through those explosions, fires, overactive radioactive devices? Well, yes. If you want to be a hazardous materials expert (many levels above technician), you only need to know two words: It depends.

In the world of hazardous materials transportation, there are no absolutes; the Secretary of Transportation can declare any substance or material as being regulated by the DOT when they have:

"determined [it] is capable of posing an unreasonable risk to health, safety and property when transported in commerce"
CFR 49, 171.8

DOT regulates: All EPA hazardous wastes, a portion of OSHA's MSDS- required materials, and part of the FDA's pesticides, etc.

Let's take the term hazardous materials. For transportation in commerce that means:

- Anything specifically listed by the DOT,

- Anything not listed by name but included generically e.g. flammable, liquid, toxic, corrosive n.o.s.(n.o.s. stands for not otherwise specified), UN 3286, [you won't really know what it is from the DOT listing, but it must be bad]

- If you're not sure if the material is covered then, you the shipper, must perform tests to see if your product burns at or below a certain flashpoint is corrosive or toxic.

There is a loophole in the words in commerce. The government is exempt, schools are exempt and private citizens are exempt. An individual may carry a 5 lb. propane cylinder home in their car without paperwork or placards or training or a security plan etc. But the retailer can't deliver it to an individual without any of those things (and more)… except when it can. I won't even mention there are differences between the U.S. and other countries and within the U.S. between modes (air/water/highway/rail).

But wait, there's more…. The DOT regularly adds new products and whole classes to its hazardous materials list. Until a spill of metam sodium was allowed to wipeout the fish in the upper Sacramento River about 10 years ago it was not regulated other than over water. The Secretary added a whole new category of materials, marine pollutants. What about those bad actors like the ammonium nitrate fertilizer used at Oklahoma City, which everyone knows are regulated – well in commerce anyway? Maybe there's only a small amount and no rules, hence there's no outward identification to emergency responders or paperwork inside. Maybe it's a small quantity, or a limited quantity, or a consumer commodity, or maybe a materials or trade which allows up to 220 pounds of flammable gas amongst other products. Maybe the shipment is moving under a DOT Special Permit (nee exemption); maybe it's a Department of Defense or Energy shipment of nuclear weapons; maybe it's on one of the biggest shippers of hazardous materials: UPS. Have you ever seen one of the BBTs (big brown trucks) placarded?

What can we do in our everyday lives? Know that 99.99% of shippers want to do it right; *and* that in many cases they are allowed to be outside the box. To quote a favorite old Sergeant, "Let's be careful out there."

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OREGON NATIONAL GUARD 102ND CIVIL SUPPORT TEAM

The 102nd Civil Support Team (CST) was authorized to become a full time team with the announcement of the Phase IV CST stand up on March 9, 2004. After a thorough screening and selection process, the first members of the full time team started duty on June 1, 2004.

The train-up of the team consisted of hundreds of hours of individual training by each member of the team.

Also part of the train-up was an external evaluation, conducted by US Army North (then 5th US Army) in October of 2005 in Eugene, Oregon. The external evaluation validated that the team was trained and capable to respond to Chemical, Radiological, and Biological Weapons of Mass Destruction (WMD) incidents.

Once all individual training and the external evaluation were completed, a certification packet went from Oregon to the National Guard Bureau, through the Department of the Army, and then to the Secretary of Defense. The Secretary of Defense then certified to Congress that the 102 CST was fully trained and mission capable. For the Oregon team, the certification was signed on July 24, 2006.

The mission of the team is to support first responders at a WMD event.

Ten full-time teams were authorized by congress in 1999. One of these teams was assigned to each of the ten Federal Emergency Management Agency (FEMA) regions.

Since 1999 an additional 45 teams have been authorized, funded, manned and equipped.

Forty-two of these teams are now certified, and the other 13 are still working through the certification process.

Once a team is certified, they are available to the Governor for response within their respective state, and also are a part of the National Response Plan.

Now that the 102nd CST is certified, it is an asset for the Governor and the Adjutant General to use in the event of a WMD incident. In addition, CST could be called to respond to incidents in other states as part of the National Response Plan.

Civil Support Team Mission Statement

To support civil authorities at a domestic Chemical, Biological, Radiological, Nuclear, Explosive (CBRNE) incident site by identifying CBRNE agents/substances, assessing current and projected consequences, advising on response measures, and assisting with appropriate requests for additional support.

COMMUNITY AWARENESS AND EMERGENCY RESPONSE GROUPS

As history shows us, a hazardous materials incident can happen anywhere at any time. The American public recognizes this and is concerned about chemical hazards, the possibility of a serious chemical emergency and the steps industry is taking to prevent them. As a result of these concerns Title III of the Superfund Amendments and Reauthorization Act was passed in 1986. However, private industry also recognized there was something they could do to help mitigate incidents involving hazardous materials and its negative effects.

One of the more successful and popular programs from the industry's effort was the Community Awareness and Emergency Response program groups (CAER groups). CAER groups consist of private citizens, industry representatives, emergency responders, emergency management officials, government agencies and others from their own communities. The intent of CAER is to provide a platform for everyone to share information, ideas, and training opportunities, and create plans for better emergency preparedness and response.

Oregon currently has six active CAER groups. Three in the Portland area and one each in Saint Helens, Albany and Eugene. They usually meet once a month depending on the time of year and scheduling needs. If you would like more information about the CAER group in your area, please refer to the contact information below. If you would like assistance in starting a CAER group in your community, call the Oregon Office of State Fire Marshal Hazardous Substance Information Hotline at 503-378-6835 Monday through Friday between 8:00 am and 5:00 pm.

Eugene: ALERT
Paula Holloway
541-484-9621
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JUST ASKING...

In each issue of HazMatters we will feature a question of the quarter to answer hazardous material related questions submitted by readers.

This month we'll take a look at explosive limits, also referred to as flammable limits. These limits refer to the minimum concentration (lower limit) and maximum concentration (upper limit) of a flammable liquid or gas between which ignition can occur. A concentration below the Lower Explosive Limit (LEL) is too lean to burn and a concentration above the Upper Explosive Limit (UEL) is too rich to burn. Any concentration between the LEL and UEL is in the flammable range of the substance.

In general, any concentration above 25% of the LEL in the open air is considered a hazardous situation. In a confined space, that safe level drops to 10% of the LEL. For example, gasoline has an LEL of 1.4% with a flash point of -45 °F. So in a confined space above -45 °F, a concentration of 0.14% of gasoline fumes presents a hazard.

It is important to remember the concentration of a substance in the atmosphere does not remain static. As the plume of a flammable substance above the UEL moves along the ground or up into the air, it will dissipate and eventually reach a concentration allowing it to burn or explode. It is generally a matter of time before a concentration above the upper limit dissipates enough to enter the flammable range.

Here are some examples of Explosive Limits:

Substance	**LEL %**	**UEL%**
Propane	2.1	9.5
Gasoline	1.4	7.6
Diesel	0.6	4.7
Acetone	2.5	12.8
Acetylene	2.5	100
Natural Gas	5	15.4
Ethanol	3.3	19
Silane Gas	1	96

Please submit questions you'd like answered to:
jamie.kometz@state.or.us

GOT ANSWERS? HAZMAT AND THE WEB OF SCIENCE © 2006!

The following is by Frederick J. Cowie, Ph.D. fredcowie@aol.com; 406-431-3531 www.fredcowie.com

For your enjoyment, I put together a hazmat quiz that should make learning and teaching hazmat a little more fun. These are things I bring up regularly and they help me make the training experience more fun and more real. Feel free to send me your answers if you are so inclined. If you want to use it in a newsletter, feel free to do so, but please leave the contact information.

Its all of one piece, life is. Life has no alternative science, no alternative periodic table, no alternative quanta, no alternative immune system. That's what makes learning and training so interesting and that's what makes hazmat and personal safety so much fun. And that's why we have these ten interesting questions.

Got answers? Without looking things up, can you answer these in 100 words or less per item? If not, why not?

1. What is the relationship of a lantern mantel to a photo-ionization detector?
2. What does a microwave oven have to do with bunker gear?
3. What does a cloth bag of water in the desert have to do with a BLEVE?
4. Why is cesium (heavy) more reactive than lithium (light), while fluorine (light) is more reactive than bromine (heavy)?
5. If radon is a chemically inert gas, how come its effect on humans is so bad?

ANSWERS
"SEE AZSERC WEBSITE AT www.DEM.STATE.AZ.US/AZSERC FOR ANSWERS UNDER LEPC AND RESPONDER TOOLS!"

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Upcoming Events

February:

Oregon Local Emergency Planning Committee Meeting
February 21, 2007 — Salem, OR

2007 Toxic Release Inventory Conference
February 27-28, 2007 — Arlington, VA

April:

National Association of SARA Title III Program Officials
April 16-19, 2007 — Kansas City , MO

HazMat Response Team Radiological Course
April 17 – 19, 2007 — Corvallis, OR

May:

1st Annual Oregon State Regional Hazardous Materials Teams Conference
May 1-3, 2007 — Sunriver, OR

**** CAER Groups meet monthly***