



Haz Mat Release

THE OFFICIAL NEWSLETTER OF THE LOS ANGELES COUNTY
FIRE DEPARTMENT HEALTH HAZARDOUS MATERIALS DIVISION



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BILL'S CORNER

In this edition I wanted to comment on what I believe are important observations. The Health Hazardous Materials Division has often excelled in a number of areas over the years. An example is its ability to meet a focused emergency situation or need. This year, we have been challenged with timely invoicing of unpermitted businesses outside of the annual billing process. With the recent push to find these facilities, all staff willingly and actively became involved and worked extremely hard to bring in a significant number of new unpermitted facilities. I congratulate and commend all technical and support staff, who made this a successful venture, especially within the time constraints of the project. Almost 2,000 new program elements added is nothing short of amazing.

Also, we had two recent metal fires that are highlighted in this edition. What questions arose from these incidents? Should we refocus our attention on metal salvagers and again emphasize general housekeeping? Where are the materials coming from? What are we doing to regulate the inherent dangers? The bottom line is, we were lucky not to have had more casualties. In recent

debriefings with

Los Angeles City Fire, we discussed ways to deal with metal fires extensively and reviewed video footage that highlighted how dangerous these situations truly are. Inspectors are requested to examine these operations closely to minimize the risk of reoccurrence. Recommendation will follow soon.

As an agency, we will soon see several changes that may affect our operations. The Fire Chief we have known for the last 21 years will be retiring. We will elect a new Governor who will likely appoint new staff at key positions in the agencies and departments we routinely work with. Any shifts in direction or priorities at the State level often impact our local programs. We are all aware that the budget and economic climate are a continuing concern and many of our colleagues in other jurisdictions are experiencing difficult times. We should all reflect on the fact that we have been relatively fortunate and should refocus our efforts on working hard to meet our mission and Division goals and objectives.

Finally, I know we have a dedicated group of hard working professional employees who see the value in their chosen career. Never lose sight of who we are and the public we serve. Extend that extra effort to complete the job, spend a little more time helping out someone in need, demonstrate teamwork and camaraderie in our workplace and do what is right! I appreciate and extend my heartfelt thanks to all who live by this motto everyday and encourage us all to see how we can do better.

For more information, contact Chief Bill Jones at 323-890-4042 or at bjones@fire.lacounty.gov.

OUR MISSION

“To protect the public health and the environment from accidental releases and improper handling, storage, transportation and disposal of hazardous materials and waste.”

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Wal-Mart State Wide Civil Case

In June of 2005, Health Hazardous Materials Division staff (HHMD) conducted a routine inspection of Wal-Mart, located in the City of Santa Clarita for compliance with hazardous waste and hazardous materials laws and regulations.

The inspection revealed violations regarding handling, storage, transportation and disposal of hazardous waste from the facility. Returned and damaged containers of pesticides, paints, aerosols, motor oil and flammable chemicals were handled and stored in violation of State and federal regulations. Wal-Mart representatives claimed that all returned, damaged and off-specification products were not hazardous waste and were shipped from the store to a distribution center in Las Vegas. Wal-Mart used its own trucks to transport the hazardous waste instead of State-certified hazardous waste transporters.

The Wal-Mart inspection was brought to the attention of the Los Angeles County District Attorney by Tony Payne, then the Supervising Hazardous Materials Specialist of the Investigation Unit during the Environmental Strike Force meeting. It was discovered that the San Diego Certified Unified Program Agency had also observed similar violations at their Wal-Mart facilities. Department of Toxic Substances Control representatives, who were present at the meeting, conducted their own investigation of a Wal-Mart distribution



center in Las Vegas together with the Federal Bureau of Investigation.

In 2006, the California Attorney General and more than 20 prosecutors, including the District Attorney of the County of Los Angeles, filed a civil suit alleging that Wal-Mart violated California Health and Safety Code Chapters 6.6, 6.7, 6.95 and the regulations promulgated under these chapters.

Wal-Mart settled the suit and paid the civil penalties and agreed to fund supplemental environmental projects. More importantly, Wal-Mart has implemented a hazardous waste program to bring it in compliance with State and federal laws and regulations.

For more information, contact James McCarron at 323-890-4068 or jmccarron@fire.lacounty.gov.

Administrative Enforcement Order Penalty Box

Highlights of AEO cases for Fiscal Year 2009-10:

Sonic Products in Gardena was fined \$1,000 for illegally disposing shaving and scrap magnesium to the trash after first binding the metal to a concrete slurry.

Research Metal Industries, Inc. settled for \$6,500 for taking four barrels of used cutting oil to the Lomita Household Hazardous Waste Collection event. A subsequent facility inspection was conducted and the respondent was cited for disposing of cutting grit containing Chromium metals on the asphalt surface.

Lights of America, a light bulb company supplier, was fined \$5,128 for illegally disposing of electronic waste (fluorescent light bulbs) to the municipal trash.

Rainbow LLC in Carson settled for \$60,000 for treating hazardous waste using unauthorized methods, illegally disposing of waste to the air, failing to provide a waste analysis plan and failing to have a professional engineer certify the treatment system, tanks and secondary containment.

La Cienega Food Equipment was fined \$5,694 for failing to submit a Business Plan and Inventory and for not paying hazardous materials permit fees.

Ramcar Batteries, Inc. in Commerce settled for \$7,000 for failing to prevent the release of hazardous materials, failing to keep containers of hazardous waste in good condition, and exceeding accumulation time of hazardous waste storage.

1-Day Paint & Body in Inglewood was fined \$3,500 for illegally disposing of paint-related waste to the dumpster and failing to provide HW generator training.

Murray's Iron Works, Inc. settled for \$2,000 for illegally disposing of metal dust to the ground and dumpster.

Evergreen Environmental Services in Carson was fined \$14,788 for failure to maintain or operate a facility to minimize an unplanned release of hazardous waste to the soil.



Pacific Magnetic & Penetrant Co. in North Hollywood settled for \$10,000 for illegally treating hazardous waste without authorization and lack of employee training.

Monterey Park Auto Body Inc. paid their outstanding permit fees in the amount of \$4,100 and was also fined \$500 for not submitting a Business Plan and Inventory.

Lekos Dye & Finishing, Inc. was ordered to pay our Division \$446,528 in penalties by the Office of Administrative Hearings. The case was initiated in response to an incident in which two employees of the textile dye and finishing company received serious chemical burns from a violent chemical reaction. One employee suffered minor injuries, but another suffered 1st and 2nd degree burns on his body and passed away a few days later. An AEO was issued for 21 violations that included failure to label containers of hazardous waste, failure to prevent the release of hazardous materials and hazardous waste, failure to separate incompatibles, failure to prepare a contingency plan and failure to provide employee training.

For more information, contact Fernando Florez at 323-890-4085 or at fflorez@fire.lacounty.gov

The Challenge of Titanium Fires

In fire suppression, water is regarded as the number one extinguishing agent. However, in industrial fires involving metals (shaving, chips, turnings, powder, or even solid blocks), water has limited usefulness because it reacts with the metals causing more fires, explosions and violent reactions. This presents difficult challenges to firefighters and emergency responders, especially when water suppression fails and threatens safety.

Titanium is used in industry because of its corrosion resistance, strength and light weight. It is used in the aerospace industry for making armored vehicles and to manufacture helmets, jewelry, eyeglasses, bicycles and other equipment. The surface is made of a thin layer of titanium oxide which is stable and non-reactive with water. However, when titanium is involved in a fire, it burns at a very high temperature, usually above 1500° F. At this temperature, water breaks down into its component hydrogen gas and oxygen. The oxygen bonds with titanium and the highly flammable hydrogen gas can explode. The sudden release of energy from the explosion will eject metal debris to the surrounding area.

On June 11, 2010, a fire broke out at the United Alloys & Metals in the City of Los Angeles. Piles of titanium turnings were stored in the facility. Although the exact cause of the fire is still under investigation, it seems the fire started in the boiler area outside the warehouse. One explosion occurred even before water was introduced and initial reports suggested that a propane tank exploded from the radiant heat of the titanium fire. A second more powerful explosion sent big chunks of metal hundreds of feet off the property and damaged nearby vehicles and property. One employee suffered fractured rib and lung contusion. It appears that water was introduced before this second explosion.

On July 14, 2010, another fire involving titanium occurred in the same company. Water was also used and there were at least two explosions. Three firefighters were injured. The



cause of the fire is still under investigation.

In the first fire, water was applied to protect propane gas cylinders from exploding. After the first explosion, firefighters rushed to protect the remaining cylinders, but did not anticipate the water reaching the burning titanium pile. In both fires, after realizing that the water caused the explosion, firefighters held off using water. But it was a too late. Successive explosions occurred notwithstanding their efforts.

Challenging questions arise when faced with titanium fires, but the following should be the starting points:

- ◆ Do not rush in. Evaluate the type and quantity of hazardous materials involved in the fire.
- ◆ Use proper personal protective equipment at all times.
- ◆ Be familiar with facility business plans and processes.
- ◆ Do not use water when combustible metals are involved in the fire. Depending on the size of the fire, surround it with dry salt, graphite or similar extinguishing agents. Consider the option of letting the fire burn itself out.

For more information, contact Jojo Comandante at 323-890-4041 or at jcomandante@fire.lacounty.gov.



Sleep— A Health Necessity

In HHMD, the Emergency Response and the Investigations Units respond to emergency calls 24 hours a day and are prone to the adverse effects of sleep

deprivation. Studies have shown that sleep loss and sleep disorders have been associated with a wide range of health consequences including an increase risk of hypertension, diabetes, obesity, depression, heart attack, and stroke.

Although individual sleep needs vary, the National Sleep Foundation has recommended seven to nine hours for adults and nine or more hours for school-aged children and adolescents. A specific strategy to improve an individual's

sleep quality is by promoting proper sleep hygiene. The Mayo Clinic has these recommendations:

- ◆ Go to bed and get up at about the same time every day.
- ◆ Don't eat or drink large amounts before bedtime. Too much liquid can cause you to wake up repeatedly during the night for trips to the toilet.
- ◆ Avoid nicotine, caffeine and alcohol in the evening.
- ◆ Exercise regularly. Regular physical activity can help you fall asleep faster and make your sleep more restful.
- ◆ Make your bedroom cool, dark, quiet and comfortable. Create a room that is ideal for sleeping.
- ◆ Sleep primarily at night. Limit daytime sleep to about half-hour and make it during mid-afternoon.
- ◆ Choose a comfortable mattress and pillow.
- ◆ Start a relaxing bedtime routine.
- ◆ Go to bed when you're tired and turn out the lights.
- ◆ Use sleeping pills only as a last resort.

A Gasoline Spill in the Park

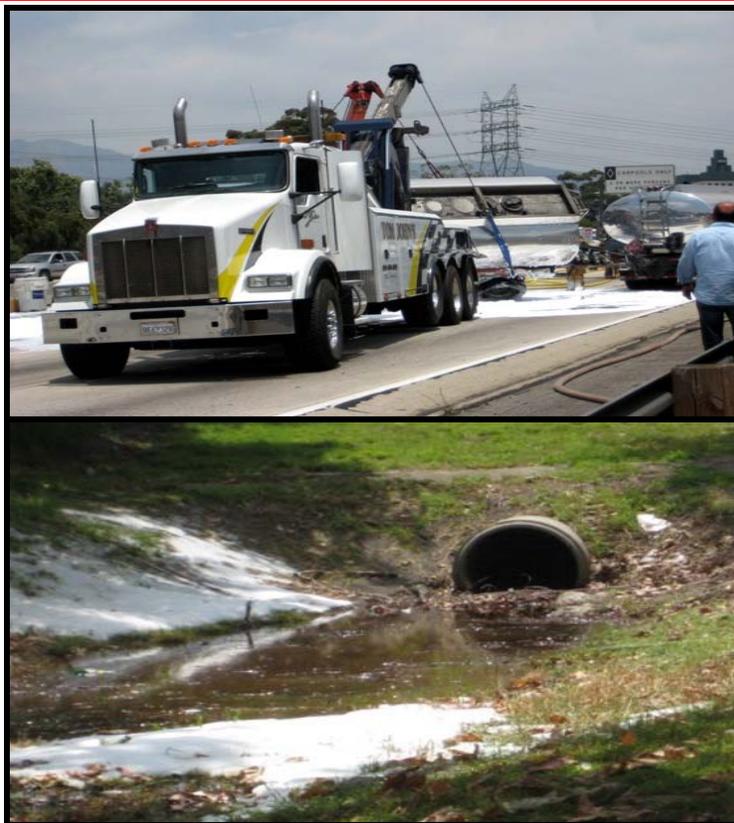
On June 10, 2010, at approximately 11:00 a.m., a gasoline tanker belonging to Pacific Tank Lines was involved in a single vehicle accident on the eastbound 134 freeway. The tanker released all 4,500 gallons of its rear trailer onto the freeway, into the drain and onto the street (Warner Blvd.), down into; p-; an underground channel and into the catch basin/marsh area of Johnny Carson Park, in front of NBC Studios. The Los Angeles River, though close to the incident, was not compromised.

The HHMD team (HH311 and HH312) arrived on scene to see a gasoline trailer on its side on the freeway, big mounds of sand to contain pools of gasoline and several fire trucks that covered the spill with foam for vapor suppression. Burbank Fire Department was the Incident Commander (IC).

Immediately, HH311 contacted the Flood Control representatives to determine the endpoint of the spill. As is the case for any hazmat spill, the first thing HHMD responders determine is the extent of the spill and the need for any containment. Following the spill, it was determined that the endpoint was the marsh area of the Johnny Carson Park. This area served as the collection point of the spill and no containment was necessary.

Several activities were occurring simultaneously. The tow truck had to make sure the trailer was empty before they up righted it. Fire trucks were on standby in case of ignition. The clean up plan by contractors was laid out and the service crew was assembled. Vacuum trucks were positioned strategically at three locations – the freeway, Warner Boulevard and the marsh area of Johnny Carson Park. After the trailer was removed, the freeway was pressure washed including Warner Boulevard. The freeway drain was flushed as well as the underground channel leading to Johnny Carson Park. After pressure washing, super fine absorbent was used to dry up the slippery road.

Two things complicated the clean up effort. First, the mounds of sand on the freeway were “overkill.” The freeway had to be opened as soon as possible and the removal of the contaminated sand delayed this. Because of the volume of sand used, HH311 decided to make use of any and all pick-



up trucks available to remove the sand. The freeway was finally opened at approximately 3:30 p.m. Second, in the removal of the contaminated soil at the Johnny Carson Park, an underground pipeline was discovered. It was 9:00 p.m. and emergency calls to the City of Burbank yielded no absolute certainty on the status of the pipeline. The clean-up crew had to work around this pipeline to remove the soil. The next morning, it was determined that the pipeline was no longer in use. The restoration of the Johnny Carson Park was completed at approximately 6:00 p.m.

It was also unusual for the HHMD responders because of the hands-on involvement of the responsible party (RP) and the massive cleanup response. Instead of the usual one contractor, there were three. Instead of the usual one vacuum truck, there were four. Instead of a skeleton crew, there were more than 30 clean up personnel utilized. HH311 can only hope that more RP's will react this way.

For more information, contact Jojo Comandante at 323-890-4041 or at jacomandante@fire.lacounty.gov.

ANNUAL HEART WALK

The Los Angeles County Fire Department has always been at the forefront of raising donations and health awareness in the fight against cardiovascular diseases and stroke through the Annual Heart Walk Fundraising Campaign. This event is sponsored by the American Heart/Stroke Association which is conducting the research and educational programs on heart diseases. This year's venue for the 5K walk will be at the Rose Bowl in the City of Pasadena on October 23, 2010. All Health Hazardous Materials Division personnel are encouraged to participate in this fun-filled event and represent our Department.

2010 HEART WALK





Chemical Exposure—Should We Worry?

In today's urban environment, everyone is exposed daily to low concentrations of different chemical substances without knowing it. Sources of chemicals are found everywhere, including the environment, at home or from the workplace. This pervasiveness has led Environmental Protection Agency Administrator Lisa Jackson to say that, "a child born in America today will grow up exposed to more chemicals than any other generation in our history."

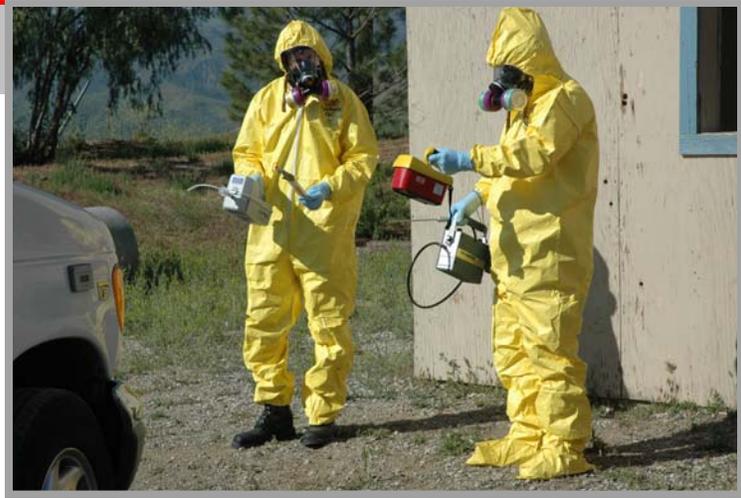
To assess the exposure of the various populations to environmental chemicals, the U.S. Center for Disease Control and Prevention (CDC) and other non-governmental organizations like the U.S. Environmental Group, the United Kingdom branch of the World Wildlife Fund and the Canadian Environmental Defence, have conducted blood and urine tests of sample populations to determine the presence of harmful chemicals in their bodies. Examples of these chemicals included heavy metals, volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), perfluorinated chemicals (PFCs), polybrominated diphenyl ethers (PBDEs), dioxins, furans, phthalates, phytoestrogens, pesticides, herbicides and others. Results of these studies showed that most of these chemicals were detected among the subject population.

Although the presence of toxic chemicals in the body is alarming, CDC states that its presence does not necessarily mean that the exposure will cause illness. Whether one gets sick depends on the type of contaminant, how it entered the body, how much entered the body, the development stage when exposure occurred, how long one was exposed, how many times one was exposed, one's individual health and how one's body reacts to the exposure. The blood or urine test results would only show that exposure has occurred. It then provides the baseline data to follow trends in exposure over time; identify unusually exposed individuals; and sometimes help clarify the relationship between exposure and dose of the chemical.

"In toxicology, dose is everything," says Karl Rozman, a toxicologist at the University of Kansas Medical Center. Vitamins and analgesics might make us feel better; however, if we take too much of them, they will make us sick. Basically the same is true for chemicals.

Chemicals can be toxic to the organ system of the human body. They cause breast, testicular, prostate, thyroid and lung cancer; asthma attacks; general breathing problems; developmental disabilities; birth defects; decreased sperm counts; early onset of menstruation and puberty and reproductive and sexual dysfunctions, to name a few (Toronto Public Health, 2005).

This begs the question: should we be worried? My answer is yes. Whenever there is any doubt or uncertainty, it is always better to err on the side of caution. Exposures to low



concentrations and for a short duration of time may look insignificant. However, there are chemicals like bisphenol A, methylmercury and lead which have been found harmful even at low doses. The old adage that dose makes the poison would refer to low or high concentration level that would produce adverse health effects. There are persistent chemicals like DDT, PCBs, dioxins and chlorinated hydrocarbons that tend to accumulate in the living tissue at higher levels and may potentially be harmful. If you have an existing health problem in metabolizing and excreting these chemicals, then you are highly vulnerable to its toxic effects. Another important factor to consider is the differences in individual sensitivity to chemicals and concentrations. Some people are hypersensitive to certain chemicals even at low doses while others have higher tolerance and low susceptibility. While we know the health effects of some chemicals to our body, there is still very little information available about the safety and health risks posed by the vast majority of chemicals in use. According to Senator Frank Lautenberg of New Jersey, of the 84,000 chemicals on the market today, only about one percent of them have been studied for safety.

In general, our knowledge of environmental exposures to chemicals is still growing. Until we know the adverse health effects of all chemicals at different exposure levels, all we can do is to take the necessary precautions to protect ourselves from their potential hazards. For those who have been acutely exposed to chemicals or have developed signs and symptoms, follow the Department Policies and Procedures on chemical exposures and injury reporting:

- ◆ Report the injury/illness to one's supervisor.
- ◆ Prepare a Form 382 (Employee's Report of Exposure) & Form 381 Report of Injury (DWC1).
- ◆ Prepare the employee's section of the DWC (Worker's Compensation Claim) and submit form to the supervisor.
- ◆ Assist, if possible, your supervisor in the preparation of the Form 389 (5020 Telephone Reporting Worksheet).
- ◆ Seek professional medical treatment, as soon as necessary and present the completed/ signed Form 383 (Treatment Referral Slip) and Form 385 (Patient Status Report) to the appropriate, approved medical provider.

For more information, contact the Dan Zenarosa at 323-890-4026 or dzenarosa@fire.lacounty.gov.

Underground Air Pollution

Southern California ranks as one of the smoggiest places in the nation. Our poor air quality is partially due to the local geography and climate which creates an inversion layer that traps the polluted air within our local atmosphere. The main contributor to air pollution is our large petroleum-consuming transportation. According to the South Coast Air Quality Management District (AQMD), over 75% of our area's smog problem is caused by vehicles and other mobile sources with internal combustion engines, including trucks, buses, agriculture equipment, construction equipment, and gas-powered lawn and garden equipment. With 16 million residents and 9.5 million motor vehicles, motorists in our area drive more than 332 million vehicle-miles every day. With this occurring, it is not surprising that Southern California has an air pollution problem. However, many people are surprised when they are informed about the presence of underground air pollution.

The majority of the ground beneath our feet is composed of unconsolidated material referred to as "dirt" by many. It is basically composed of various combinations of sand, silt and clay with interconnected spaces (or pores) within this soil matrix. These pores contain water and air. When the pores become saturated with water, typically at deeper depths, you have groundwater. The gaseous phase within the unsaturated pores above the groundwater is the soil atmosphere. Air and other gaseous compounds move through the pores, but the soil atmosphere does not blow like the wind. The air moves slowly through the soil pores by convection and diffusion. The source of much of this soil contamination is from releases from petroleum storage tanks and refineries. Soil contamination at industrial sites usually goes unnoticed by the public. It is different when subsurface contamination impacts residential areas because people become concerned about the possibility of gaseous contaminants migrating from the ground to their homes. This phenomenon is referred to as vapor intrusion by environmental professionals and regulatory agencies.

If a homeowner lives adjacent to a contaminated site (let's assume it's a former corner gasoline service station), a significant plume of gasoline-affected soil could be a concern to the homeowner even if it does not impact the soil beneath their property. Volatile contaminants associated with gasoline such as benzene, could migrate through the soil atmosphere onto the homeowner's property. In this case, environmental testing could be performed to verify whether potential vapor intrusion of benzene was a concern. Initially, soil vapor samples at depths of five feet could be collected from the homeowner's property that borders the contaminated site in accordance with Cal-EPA guidance. If laboratory results of the vapor samples indicate that benzene concentrations exceed State residential screening levels, typically the data is further evaluated because screening levels are neither regulations nor enforceable. If it is determined that vapor intrusion is a concern after further evaluation by the involved environmental professionals and oversight agencies, then the next step could include the collection of soil vapor immediately beneath the concrete slab of the home. This is accomplished by drilling holes through the floors of the living room and bedrooms. If detectable concentrations of benzene are present beneath the



sub-slab, then the next step would likely be indoor air sampling over a 24 hour period. All indoor sources of volatile contaminants (e.g., paint, cleaning supplies, finger nail polish remover and so on) have to be removed before indoor sampling can begin. In addition, outdoor air samples are typically collected to determine the background concentrations of volatile contaminants in the ambient air. If indoor air samples indicate that benzene concentrations are non-detectable or less than screening levels, then all is well. Sometimes the background concentrations of contaminants in the outdoor air can be greater than indoor air concentrations. This complicates the evaluation and mitigation process because the outdoor air is likely contributing to the indoor air contamination. Once it is determined that vapor intrusion is impacting the home, mitigation measures can be pursued, such as construction of sub-slab screened piping networks with an applied vacuum to vent gaseous benzene away from the home. Once the source of petroleum contamination is removed or adequately remediated, the potential for long-term soil vapor intrusion impacts is eliminated.

We have been aware for decades that the outdoor air we breathe is polluted primarily from the exhaust emitted from our cars. Had not volatile contaminants from the subsurface intruded into some of our homes, we might not have known the existence of underground air pollution.

For more information, contact Richard Clark at 323-890-4027 or rclark@fire.lacounty.gov.

Cyanide Blue

The word cyanide is derived from *Kyaneos*, Greek for “dark blue”. Cyanide may be a potent poison, though it is not toxic in all forms or concentrations. Cyanide occurs naturally in food crops and plants. Certain bacteria, fungi and algae produce cyanide. Species of beetles, centipedes, millipedes, moths and butterflies synthesize and excrete cyanide for defensive purposes (Duffey, 1981). There are over 800 species of plants that are cyanogenic and contain low levels of cyanide including almonds, cashews, cassava, bamboo shoots, lima beans, linseed, millet, maize, sweet potatoes and coffee beans (Eyjolfsson, 1970). Cyanide is also present in the seeds of apples, cherries, mangoes, peaches and apricots.

In industrial settings, cyanide is found in electroplating, jewelry manufacturing, metallurgy, photographic developing and mining. Cyanide is ubiquitous in paper, textile and plastic manufacturing. Cyanide gas is used for extermination of pests and vermin in ships and buildings. Prussian blue, a cyanide complex, is used for dyeing jeans, creating blue prints and painting pigments.

The most toxic form of cyanide, hydrogen cyanide, is a pale-blue or colorless liquid (hydrocyanic acid) at temperatures below 78° F. At higher temperatures, it is a colorless gas. Some describe cyanide as having a “bitter almond” smell; however, it does not always give off an odor and the perception of this odor is a genetic trait (20-40% of the general population cannot detect hydrogen cyanide); also, rapid olfactory fatigue can occur (ASTDR). Hydrogen cyanide is extremely volatile and can produce lethal concentrations at room temperatures; its vapors are flammable, and potentially explosive.

Hydrogen cyanide may enter the human body, through inhalation, ingestion or absorption through the eyes and skin. Although exposure to cyanide may vary, depending on the dose, time and manner of exposure, its biochemical pathway is similar in the human body. Once in the bloodstream, cyanide prevents cells from using oxygen, leading to cellular asphyxiation or hypoxia. The lack of oxygen further leads to accumulation of lactate in the blood. The combined effect of hypoxia and lactate acidosis affects the central nervous system and may result in respiratory failure and death. At higher doses, the heart, other organs and systems in the body are also affected.



Initial symptoms of cyanide poisoning may include headache, drowsiness, weak and rapid pulse, deep and rapid breathing, flushed red face, nausea and vomiting. Following these symptoms, may be convulsions, dilated pupils, clammy skin, weaker pulse and shallower breathing. Lastly, the heartbeat becomes slow and irregular, body temperature falls, the lips, face, and extremities turn blue and the individual goes into a coma and death occurs.

The CDC (Centers for Disease Control and Prevention) reports that for the general population, the most common source of exposure to hydrogen cyanide is through smoking tobacco or exposure to second hand smoke. In building fires, cyanide is commonly present in the smoke from burning plastics (polyacrylamines, polyurethane and polyacrylics). Cyanide is also a part of forest and wild land fires due to incomplete combustion. Cyanide, fortunately, is not accumulative and does not persist in the environment.

In 2008, Health Hazardous Materials Division received authority from Department of Toxic Substances and Control (DTSC) for oversight of Permit by Rule treatment of aqueous cyanide waste. Notification letters regarding the new regulations were sent to electroplating facilities in our jurisdiction. DTSC notes that failure to segregate incompatible wastes is one of the most common violations in plating shops. If waste containing cyanide accidentally mixes with acidic waste, it may create hydrogen cyanide gas and may potentially be explosive. Containers with reactive wastes must be separated by a wall, berm or other device that will prevent mixing of the wastes if a spill occurred. Cyanide-bearing waste must be segregated from any acidic material, waste or not. During inspections of electroplating facilities, it is critical that we are mindful of the potential for generation of toxic hydrogen cyanide gas to ensure our own safety and the employees of the facility.

For further information, contact the HHMD Tier Permitting Coordinator at 310-348-1792.

Suspicious Letters and Packages—What Should You Do?

The protocol for the handling and reporting of suspicious mail or packages in administrative sites or District offices is as follows:

1. Do not move the suspicious package. Leave it where you found it.
2. Isolate and secure the area— keep others away.
3. Notify the Emergency Response Coordinator (ERC) immediately to make an assessment.

4. ERC will notify Management and Fire Command and Control Facility (FCCF)
5. If not at Headquarters, contact the immediate supervisor.



Photo taken from FBI Advisory

Refer to Health Executive Advisory #11 for more information.

Does anyone have enough time to read the vast amount of information to keep up to date with our profession? As information technology advances, major changes in our field of work will put additional demands to keep abreast with these changes. According to Enrico Coiera, an Australian health economist, "the amount of information is growing exponentially, but our attention is not."

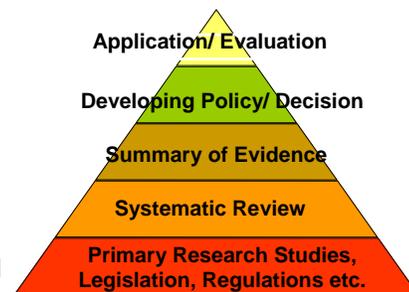
In the face of this pressing reality, everyone will need to know what to look for and where to look in order to maintain one's credibility and efficiency in this information age. Once the right information is found, critical review or appraisal of that information is necessary to find out if it is valid, useful and applicable to the program or to the needs of the stakeholders. A shift in the practices of basing decision on opinion, past practices, authority advices and precedents toward use of scientific proof, research and evidence is the accepted norm. As they say, "Evidence-based practice is a state of mind....a constant process of inquiry. Why am I doing it this way? Is there evidence that can guide me to a better outcome?" (Foster, 1999). Evidence-based practice is defined as "the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients" (Sackett et al 1996). It is a process which combines the individual's expertise and the best available external evidence from systematic research.

The hazardous materials management program belongs to the domain of public health and therefore would require the same rigorous and stringent standards of evidence-based practice in serving the public interest. Evidence is expected in all our decisions whether it is in inspection, enforcement, policy making, formulating guidelines, implementing new programs or services, and whenever change is required.

However, unlike evidence-based medicine, the evidence-based practice in the hazmat program should not rely only on one type

of evidence such as research with empirical evidence

from randomized control trials but considers the use of the best available evidence when dealing with everyday circumstances. This could be peer reviewed published documents, journals, researches, scientific findings of experts, groups, network, including legislations, protocols, standards, regulations and best practices. Thus, a broad, multiple information base is required.



Fortunately, there are some websites that have evidence-based resources that we can use:

- <http://www.epa.gov>
- <http://www.cdc.gov>
- <http://www.ahrq.gov/research>
- <http://www.csb.gov/>
- <http://www.who.int/topics/en>
- <http://www.cochranelibrary.com>
- <http://www.ncbi.nlm.nih.gov/pubmed>
- <http://www.healthlinks.washington.edu/ebp>
- <http://www.cebm.net/index.aspx?o=1001>
- <http://www.group.bmj.com/evidence-centre>
- <http://www.plos.org>
- <http://www.tripdatabase.com/search>

With evidence-based practice, one will remain up to date with new developments, reduce wide variations in individual professional practices, eliminate wrong practices and consequently increase work effectiveness and the quality of public health services.

For more information, contact Dan Zenarosa at 323-890-4026 or at dzenarosa@fire.lacounty.gov.

Aboveground Petroleum Storage Tank (APSA) Update



The training for APSA started on May 5, 2009, in preparation for its statewide implementation on January 1, 2010. Since that time, in-service and outside training on APSA has been

conducted throughout the Los Angeles and Orange County areas that were attended by HHMD personnel. Inspection staff learned about inspection report preparation, documentation, record keeping and differences in procedures between Tier 1 and Tier 2 qualified facilities.

On July 28, 2010, The US Environmental Protection Agency proposed to extend the compliance date for certain facilities subject to the Spill Prevention Control and Countermeasure

(SPCC) rule to November 10, 2011, as part of EPA's multi-phased strategy to address concerns with the current SPCC regulation. Currently, the deadline for preparation and implementation of SPCC Plans are as follows:

- ◆ A facility starting operation on or before August 16, 2002, must maintain their SPCC Plan, make any necessary amendments to the plan and fully implement it by November 10, 2010.
- ◆ After August 16, 2002, through November 10, 2010, the facility must prepare and implement a plan no later than November 10, 2010.
- ◆ After November 10, 2010, the facility must prepare and implement a plan before beginning operations.

Tier II template, which can be used to comply with APSA regulations is available on the Cal CUPA Forum website at:

http://www.calcupa.net/programs/aboveground_storage_tanks_spcc/default.asp. For HHMD staff, APSA related documents and web site links are accessible through our shared drive.

For more information contact Arturo Mico at 323-890-4024 and Danny Yniguez at 818-364-8291.



A Look at Industry Regulation-CalARP Program 1

Certain types and amounts of hazardous materials used by owners and operators have been recognized by the California legislature as being a high threat to public health and the environment if they are accidentally released during a catastrophic event or an operational practice. As a result, the California Health and Safety Code, Sections 25531-25543.3, authorizes the Unified Program Agencies (UPA) to implement the California Accidental Release Prevention (Cal ARP) program. In Title 19 of the California Code of Regulations (19 CCR), the requirements that underscore the Cal ARP program are similar to the requirements of the Chemical Accident Prevention Provisions of Title 40 in the Code of Federal Regulations, Part 68. But 19 CCR has particular requirements for the management of hazardous materials that are not recognized by the federal government. These particular requirements as provided in the Risk Management Plan (RMP) include an external event analysis and a seismic assessment. The regulations pertain to facilities having hazardous materials listed as State regulated substances and the amount is at or above particular threshold quantities.

There are two ways for owners or operators of businesses to know if they need to adhere with the California Accidental Release Prevention regulations. First, the owners or operators need to compare the types and amounts of their hazardous materials with the lists of regulated substances on the federal "List of Regulated Toxic Substances and Threshold Quantities for Accidental Release Prevention," which is in Title 40 of the Code of Federal Regulations, Part 68.130. They should also check the California list of regulated toxic substances in "Table 1—Federal Regulated Substances List and Threshold Quantities for Accidental Release" (Table 1), which is in 19 CCR 2770.5. If the type and amount of hazardous materials at a facility are not on these lists, then the owners or operators need to check if the hazardous materials are listed in "Table 3—State Regulated Substance List and Threshold Quantities for Accidental Release Prevention," found at the end of 19 CCR 2770.5. If the type and amount of hazardous material used by the owner or operator is listed on Table 3, then the owner or operator is required to comply with Cal ARP program regulations.

Owners of facilities with any regulated substance above the threshold quantity need to identify the RMP program level—Program 1, Program 2 or Program 3. First, the owner



determines the amount of regulated substance in the largest vessel at the facility. This amount serves as a value for the hazard assessment procedure to calculate the distance that a regulated substance will disperse during an accidental release. In order to qualify for Program 1 RMP, the toxic endpoint—the distance covered by a regulated substance before it is no longer toxic—must not reach any public receptor—school, nursing home, residential area or an adjacent business—or any environmental receptors, such as a lake or a park. If the toxic endpoint reaches a public or environment receptor, then the owner needs to comply with Program 2 or Program 3 RMP regulations.

The presence of hazardous materials in amounts under the threshold quantities of Table 1 but above the threshold quantities of Table 3 is not the only consideration of owners to submit a Program 1 RMP to the UPA. Aside from showing that the distance to the toxic endpoint of the regulated substance is not located at or beyond any public receptor, there must be no history of any accidental releases of a regulated substance at the facility within the previous five years from the date that the RMP is submitted to the UPA.

As most owners and regulators agree, the requirements of a Program 1 RMP are considerably less complex than the requirements of a Program 2 or 3 RMP. The following requirements for a Program 1 RMP with their applicable regulatory section are as follows:

- ◆ Registration (19 CCR 2740.1);
- ◆ Hazard Analysis of a Worst-Case Release (19 CCR 2750.3);
- ◆ Documentation that the nearest public receptor is beyond the toxic endpoint (19 CCR 2735.5(d));
- ◆ Five-Year Accident History (19 CCR 2750.9);
- ◆ Coordination with Local Emergency Planning and Response Agencies (19 CCR 2735.5(d));
- ◆ Signature, Title, and Date of the owner that certifies the existence of the conditions at the facility that allow for the owner to submit a Program 1 RMP (19 CCR 2735.5(d)).

Any business owner of a facility handling regulated substances who has questions about the three RMP program levels may contact the CalARP Unit in the Health Hazardous Materials Division at (323) 890-4035.

For more information, contact Mike Whitehead at 323-890-4109 or at mwhitehead@fire.lacounty.gov.



DIVISION DRILL: THE INSIDE STORY

The Health Hazardous Materials Division (HHMD) held its annual Division Drill at the Del Valle Regional Training Facility on April 15, 2010. Four classroom modules, including hands-on participation, were presented at HHMD Headquarters on April 14th and culminated in four hazardous material scenarios at Del Valle on the 15th.

The purpose of the 2010 Division Drill was to provide knowledge, experience and hands on emergency response training for approximately 50 non-responding hazardous materials specialists in the inspection, site mitigation and California Accidental Release Prevention sections of HHMD. In event of a large terrorist attack or a hazardous materials incident that overwhelms the normal response capabilities of the Emergency Operations Section (EOS), the non-responding specialists could be called to provide support and help for EOS responders.

The training was organized and conducted primarily by the Health Hazardous Materials Counterterrorism Task Force and the Emergency Operations Section led by Barbara Yu, Supervising Hazardous Materials Specialist. Radiation training and assistance was provided by Environmental Health Specialist Jeff Day from the Department of Public Health, Radiation Management Division of Environmental Health. All technical staff of the Division participated in the drill either as trainees, trainers, proctors, support staff or observers.

Numerous meetings were conducted by drill organizers to carefully develop four realistic scenarios based on real emergency response calls. For these scenarios, lists of props, materials and supplies were formed and the items obtained. Specific locations to best suit each scenario were predetermined on visits to Del Valle. Other considerations such as safety, common problems faced by responders and not generating hazardous waste from the scenarios were incorporated into the scenarios. A special file was set up for drill organizers to document scenarios, supply lists, training presentations and other written material used for the drill. Access was limited to drill organizers to ensure that the scenarios were unknown to the participants until the day of the drill.

Prior to the drill, participants attended classes consisting of lectures and hands-on training for identifying biological agents and unknown chemicals, sampling techniques and instrumentation usage. Site survey, approach and entry considerations were also discussed.

On the day of the drill an elaborate mechanism to randomly divide the participating staff into color-coordinated teams was devised. Different colored ribbons were issued to each of the four teams. In addition, check lists were formed to judge the performance of critical elements of the scenarios and rate the teams' performance amongst each other. The teams were faced with solving incidents involving a suicide in vehicle from an unknown cause, a biological attack on a business, abandonment of unknown chemicals and a radiological incident from a suspected "dirty bomb." The instructors and assistants from the day before became score keepers and rated the teams performances. Supervising Hazardous Materials Specialists chaperoned the different teams and ensured that there were no problems at the scenarios. Due to the large number of participants, distance from nearby eateries and lack of available time, lunch was catered to the location.

The winning team was acknowledged by management and certificates of appreciation were issued to each team member. Photographs from the drill, including the different scenarios, the winning team and the drill participants were mounted and posted at Health Haz Mat headquarters.

The 2010 Division Drill was the first in-depth hands-on training exercise. The drill organizer plans to continue and make the 2011 Division Drill even better!

For more information, contact Michael Uyehara at 323-8904096 or at muyehara@fire.lacounty.gov.

FOR HAZMAT/ HAZWASTE QUESTIONS:

**Go to HHMD Hotline at
<http://www.askhmmd@fire.lacounty.gov>**

**For other information, visit HHMD website at
<http://fire.lacounty.gov/HealthHazMat/HealthHazMat.asp>**

Employee Wellness Program

Since the mid-1990s, the Los Angeles County Department of Human Resources has offered a Countywide Wellness Program to improve the health and productivity of County employees and lessen their health-related costs by helping employees change their lifestyle patterns through wellness initiatives. Health seminars and webinars on topics such as nutrition, weight management, heart health, diabetes, cholesterol, managing stress, asthma, breast and cervical cancers, ergonomics, etc. are being provided regularly. Yoga, Pilates and salsa dancing are available to employees located at the Hall of Administration on certain weekdays while health fairs are scheduled annually.

Personnel of the Health HazMat Division (HHMD) work in various adverse conditions that require them to be physically and mentally fit to carry out their duties and responsibilities. Inspectors conduct their field inspections regardless of weather conditions. All day, they drive their vehicles from one facility to another putting them at high risk for accidents and other road hazards. Once the inspection is underway, they become vulnerable to chemical exposure and sometimes become involved in tense enforcement confrontations. Emergency responders and investigation unit personnel, on the other hand, are on call assignments 24 hours a day, disrupting their normal sleep cycle and making them prone to sleep deprivation. All staff are trained in the use of personal protective gear and are often required to carry heavy loads of equipment and instrumentation. Administrative staff are likewise predisposed to diseases resulting from office work and from the stresses of high work expectations.

With these types of work environments, the health seminars and webinars of the County's wellness program are helpful and valuable resources for HHMD personnel to get health information and as a forum for health activities. In addition, the Paul Donohue Fitness Center in the LAO Headquarters is also accessible to everyone, who wants to workout and exercise. A Wellness Fitness Unit in the Fire Department also schedules an array of health activities such as the Health Fair, Heart Walk, "Fat Off" and weight loss contest to ensure physical fitness and health awareness amongst employees. The



promotion of health and safety is strong in our Department and our Division.

Research spanning more than a decade has consistently shown that every dollar invested on a corporate wellness program can return more profits and benefits to the workplace. Overall, this program strengthens personal relationships within the organization and in turn creates an ideal working environment for everyone.

For information on the schedules of health seminars and webinars, go to : http://dhr.lacounty.info/cms1_043506.pdf or <http://dhr.lacounty.info/2010%20Webinar%20Schedule.pdf>

THE 13TH ANNUAL CALIFORNIA UNIFIED PROGRAM AGENCY (CUPA) CONFERENCE



The 13th Annual CUPA Conference will be held on January 31, 2011 through February 3, 2011 at the Garden Grove Hyatt Regency Hotel in Orange County. The deadline for hotel reservation at quoted rates is January 7, 2011. The deadline for submission of scholarship applications for the CUPA Conference is on October 31, 2010

For more information, go to :

<http://www.calcupa.net/conference/2011/default.asp>

IN MEMORIAM

We honor and mourn our colleagues who have died.



Tom Provost was with the Emergency Operation Section and worked with HHMD for 15 years.



Darin Childers was with the Investigation Unit and worked with HHMD for 15 years.

The Health Hazardous Materials Division (HHMD) is engaged in preparing and updating its personnel to conduct damage inspections (DINS) and hazardous materials assessments during fires and other kinds of disaster. HHMD Hazardous Materials Specialists perform DINS activities as Technical Specialists in Damage Inspection within the incident command system. All have completed an initial damage inspection course consistent with the FIRESCOPE curriculum, ICS 200, and ICS 190. HHMD has been performing damage inspections for nearly 20 years and has responded to over 20 major fire incidents.



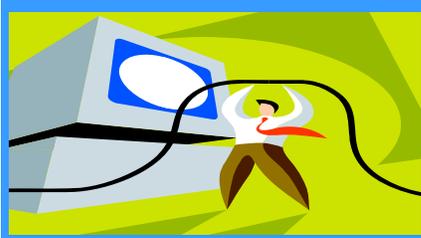
On June 15, 2010, a DINS refresher class for eligible HHMD technical staff was held at LAO Headquarters' Training Center. Forty-one HHMD personnel attended the day-long training which included field inspection procedures, database use, safety, asbestos identification, use of GPS, radio communication training and field exercises. Fire Fighter Specialist Jerry McClelland provided an excellent training on the use of GPS and radios. Participants were in full wildland fire personal protective equipment during the exercise.

data collection for DINS reporting. There are now a total of six fully stocked and ready to go DINS kits. Two of the kits are at the North Inspection office in Sylmar and the other four are at HHMD headquarters in Commerce. As always, HHMD is prepared and ready to provide DINS teams whenever necessary to the Incident Commanders on any type of disaster.

Recently, DINS committee member George Terastvadsadrian developed a new data base that will broaden and enhance our

For more information, contact Bill Westcott at 818-364-7126 or at wwestcott@fire.lacounty.gov.

CERS CONNECTION



California Electronic Reporting System (CERS) Update

In the last issue of the HazMat Release, AB2286 requirements for electronic reporting were discussed. From among the various options, HHMD has elected to use the California Environmental Reporting System (CERS). The deadline for compliance is January 1, 2013. By this date all businesses must submit Hazardous Materials and

Consolidated Contingency Plan information electronically through CERS, and all Certified Unified Participating Agencies (CUPAs) must accept electronic submissions. CUPAs must also report Inspection and Enforcement data electronically to the State.

As yet, no data exchange standard has been released by the State and it was recently announced that any large-scale pilot testing should be avoided until a data exchange tool has been developed by Decade Software. The data exchange tool will serve to automate the exchange of data in real time between CERS and Envision Connect. HHMD's planned pilot, which was to include up to 300 sites and scheduled to begin in November 2010 is being re-evaluated pending further development and consideration of alternatives approaches.

A likely change under consideration to HHMD's overall AB2286 plan as a result of delays in the data exchange standard and tool, is a refocusing of our efforts on a pilot project to evaluate an Electronic Field Inspection System as part of the collection and reporting of Inspection and Enforcement data.

CERS continues to be an actively developing system which has seen several major improvements since its inception including a recent feature for first responders. HHMD staff continue to participate in the CERS Regulator User Group's meeting and actively participate in the technical development and implementation of the State electronic reporting program..

For more information, contact George Terastvadsadrian at 323-890-4072 or at gterastvadsadrian@fire.lacounty.gov.



Bill Jones

Chief

**Health Hazardous
Materials Division**

Haz Mat Release is an effort to foster an exchange of information. We welcome any questions or comments.

Dan Zenarosa

Editor

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