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COUNTY OF SAN DIEGO
DEPARTMENT OF ENVIRONMENTAL HEALTH (DEH)
HAZARDOUS MATERIALS DIVISION (HMD)



Environmental and Public Health through leadership, partnership and science

ENVIRONMENTAL PRESS



CHIEF'S NOTES
By Michael Dorsey,
HMD Chief

It is that time of the year when local government department heads and program managers prepare their budgets for the upcoming fiscal year (2003-04). This year may prove to be the most challenging of all. Not only are we faced with the fiscal crisis occurring in Sacramento but other factors that will strain our budgets and subsequently our resources: increased fuel and energy costs, increased labor and worker compensation costs, homeland security costs, and a slow economy. Governor Davis proposes to eliminate more than \$4 billion in back-fill payments to cities and counties for revenue losses resulting from the state's reductions to the Vehicle License Fee. At the same time the administration wants counties to take on additional program responsibilities. For many local jurisdictions loss of revenue and increased costs may result in deep cuts in resources and subsequently overall service. Although San Diego County will certainly be impacted by loss of revenue and increased costs, the General Management System (GMS) established by the Board of Supervisors in 1998 will lessen this impact. The County's GMS has five overlapping components that form an ongoing cycle. Each component helps the County ask and answer crucial questions:

Strategic Planning (Where are we going?) is long-range (five year) planning.

Operational Planning (How do we plan to get where we are going?) is how we allocate resources to specific programs and services so we can implement the Strategic Plan

Monitoring and Control (Are we on track?) is the process that allows us to measure whether we are sticking to our goals and our budgets.

Functional Threading (Are we working together?) is how we work as a team to achieve the important goals we share.

Motivation, Rewards, and Recognition (Are we sharing goals and encouraging success?) completes the GMS loop by engaging the County's most critical resource -our workforce.

We are using the GMS within the Hazardous Materials Division (HMD) to not only prepare our budget for this upcoming fiscal year but to assist us in our ongoing Most Efficient Organization (MEO) process. This January HMD established a Fee Analysis Sub-Workgroup as part of our Industry Coordination Workgroup to assist us in looking at program mandates, program services, workload indicators and cost containment. HMD's overall goal is to continue to provide the highest level of service with the most efficient organization.



HMD FEATURED EMPLOYEE
Mike Handman
Supervising Environmental Health Specialist (SEHS)
DEH Specialist of the Year 2003

One name always comes to mind when we connect a personal face with the terms hazardous materials or emergency response -Mike Handman. Upon becoming a Registered Environmental Health Specialist in 1978, Mike joined the County of San Diego's Health Department as a Sanitarian. It was in 1981 that the creation of a Hazardous Materials Management Division was envisioned. Mike was one of the original six members of this newly-formed division. Under Mike's expertise and personal commitment, an initial bond with the City of San Diego Fire Department was formed to respond jointly to hazmat incidents. This later led to the creation of the County's Hazardous Incident Response Team (HIRT).

During his career, Mike has spearheaded numerous projects. Mike oversaw one of

the County's first Superfund sites and assisted in drafting the original County Hazardous Materials Disclosure Ordinance prior to the implementation of the 1986 State legislation. Mike has been a Supervising Environmental Health Specialist in charge of the Hazardous Materials Emergency Response Team since 1982 and has made this program into one of the best in the nation. In addition to being a Registered Environmental Health Specialist, Mike is a California Registered Industrial Hygiene Specialist, a California Special Training Institute Hazardous Materials Technician and Specialist, and holds a Hazardous Materials Management Certificate from the University of California San Diego. Mike received his Bachelor of Arts degree in Environmental Biology and Master of Arts degree in Environmental Biology/Occupational Health from Humboldt State University.

Over the years Mike has been involved in numerous statewide committees and organizations. Most recently he has participated on the County's Metropolitan Medical Strike Team and Weapons of Mass Destruction training exercises. Mike is also responsible for Disaster Preparedness Planning for the Department of Environmental Health and the administration of the Border contract agreements between the Department of Toxic Substances Control and U.S. EPA for hazardous waste inspections and emergency communication along the U.S. Mexico Border region.

On March 28, after 25 years of dedicated service, Mike retired from the County. He will pursue a career in education and environmental consulting. The Department of Environmental Health owes a great deal to his dedication and hard work. His dynamic presence and enthusiasm will be missed by all!



## Handling Mercury Wastes

By Clarissa Hart,  
Environmental Health Specialist II



### What do you do with your waste mercury and waste mercury contaminated equipment?

Mercury is commonly used in so many applications—from the medical to the automobile industry—that it is sometimes forgotten that mercury is a hazardous waste under both the Federal and State requirements. Technical grade mercury or mercury sold as a commercial chemical product is a federal listed hazardous waste (U151). Any substance containing mercury could also be hazardous for the characteristic of toxicity (D009). The ways in which you use mercury and the types of waste you end up with will determine the manner in which you have to classify the waste streams. For instance:

➤Unused, contaminated mercury (not in any equipment or instruments):  
When Reclaimed/recycled: Considered a non-RCRA hazardous waste. A generator can accumulate and transport up to 10 pounds of waste elemental mercury before recycling. The transportation and recycling of less than 10 pounds of waste elemental mercury is not subject to manifest requirements, however, maintaining a receipt or a log is highly recommended to document proper management.

When Discarded/Disposed: It is a listed hazardous waste (waste code U151) and all applicable hazardous waste regulations apply. All waste mercury must be collected in a closed container with a hazardous waste label.

➤Mercury Containing Products: Effective 03/15/2003, certain mercury-containing products may be managed as universal waste under the new Universal Waste Regulations when they are recycled.

Products containing mercury that can

be considered universal waste when sent out for recycling are:

- mercury thermostats,
- lamps containing mercury,
- mercury-containing motor vehicle light switches,
- motor vehicles that contain such switches,
- non-automotive mercury switches,
- products that contain such mercury switches,
- dental amalgam wastes,
- mercury-containing pressure or vacuum gauges,
- mercury-added novelties,
- mercury counterweights and dampers,
- mercury thermometers,
- mercury dilators and weighted tubing,
- mercury glass flow regulators and
- mercury-containing rubber flooring.



A mercury-containing product becomes a waste on the date it is discarded or the date the handler decides to discard it. If these products are recycled, they are considered universal waste and subject to the requirements described below. If they are discarded/disposed of, they are considered hazardous waste and must be handled under all applicable hazardous waste regulations.

➤ **Universal Waste Regulations** ◀  
Applicability: These new regulations apply immediately to any mercury-containing products that meet the characteristics of hazardous waste under California Code of Regulations, Division 4.5, Chapter 11, Article 3. For products that do not meet the mercury hazardous waste characteristic, there are different dates for the implementation of these new regulations, depending on the type of mercury containing product.

Regulations are effective immediately\* for: Thermostats, dental amalgam, pressure or vacuum gauges, mercury counterweights and dampers, thermometers, gas flow regulators, dilators and weighted tubing, and mercury-containing rubber flooring.

\*Except for Conditionally Exempt Small

**Quantity Generators.**

For certain mercury containing products, regulations effective at a later date, including:

**01/01/04:** Mercury-added novelties

**02/09/04:** Mercury containing lamps, mercury thermostats.

**01/01/05:** Mercury-containing motor vehicle light switches and motor vehicle mercury switches

**02/02/06:** Non-automotive mercury-switches

**Handling**

All universal wastes must be handled in a way that prevents releases of any universal waste or component of a universal waste to the environment. This includes closed, non-leaking containers that are in good condition and packing materials adequate to prevent breakage during storage, handling, and transportation.

**Labeling**

Universal wastes must be collected in closed labeled containers labeled with the contents of the container and a start date of accumulation. Universal wastes may be accumulated for one year from the date the waste is generated. If the wastes are disposed of as a hazardous waste, they must be collected in closed containers with complete hazardous waste labels.

**Records**

Universal waste handlers that are removing mercury switches from automotive vehicles and old appliances must maintain the following records onsite for at least three years :

- The total number of vehicles crushed, baled, sheared, or shredded;
- The total number of appliances destined for shredding;
- The total number of vehicles or appliances destined for crushing, baling, shearing, or shredding that were determined to contain one or more mercury switches;
- The number of mercury switches removed from these vehicles and

appliances; and

e. The number of motor vehicles from which mercury switches could not be removed due to accidental damage to the vehicle.

All universal waste handlers must maintain onsite for at least three years, records of each shipment of universal waste sent from the handler to other facilities. The record for each shipment of universal waste sent shall include the following information:

- The name and address of the universal waste handler and the destination facility;
- The quantity of each type of universal waste sent (e.g., thermostats, lamps, switches, etc.);
- The date the shipment of universal waste left the facility.

**Reduced requirements for Conditionally Exempt Small Quantity Generators (CESQGs):**

If a facility generates less than 100 kg/220 lbs/27 gal of RCRA hazardous waste and universal waste in any calendar month, they may dispose of 220 lbs or less per month of universal waste lamps and thermostats to a landfill permitted to accept municipal solid waste or hazardous waste through 02/08/04.

From 02/09/04 through 02/08/06, CESQGs may dispose of no more than 30 universal waste lamps in any calendar month to a landfill. As of 02/09/04, no mercury thermostats can be disposed of to a landfill.

Effective now, if a facility generates more than 100 kg/220 lbs/27 gal of RCRA hazardous waste and universal waste in any calendar month, their waste lamps and thermostats must be disposed of as a hazardous waste or sent out for recycling.

For additional questions, please contact the Hazardous Materials Duty Desk at (619) 338-2231. For the full text of the Mercury Regulations visit the Department of Toxic Substances (DTSC) website: [www.dtsc.ca.gov/HazardousWaste/Mercury/index.html](http://www.dtsc.ca.gov/HazardousWaste/Mercury/index.html).

**Potassium Iodide and a Nuclear Incident**

By Ron Yonemitzu  
Senior Health Physicist



In this environment of heightened security we are being exposed to new terms and issues all the time. Something that has been in the news recently is the use of Potassium Iodide pills in Emergency Planning. They can be used as a protective measure for the general public in the unlikely event of a severe nuclear power plant accident including radioactive iodine. The following are some facts to help you understand the function of Potassium Iodide and determine in what instances it can be an effective safety measure.

**What is Potassium Iodide (KI)?**

Potassium Iodide is a salt, similar to normal table salt. Its chemical symbol is KI and it comes in 130-milligram pills, which is the recommended adult dosage. KI is NOT radioactive.

**Why is KI used in some nuclear emergencies?**

The thyroid gland constantly removes iodine from the bloodstream to carry out its function of hormone production. KI protects the thyroid by "flooding" it with iodine and preventing radioactive iodine from being absorbed into the gland.

**When is KI needed?**

ONLY during a nuclear power plant emergency that involves the release of radioactive iodine. The nearest power plant is the San Onofre Nuclear Power Plant at the North end of Camp Pendleton. On February 5<sup>th</sup> the Governor's Office of Emergency Services (OES) announced that it would be providing potassium iodide (KI) tablets to all residents and workers in the Emergency Planning Zones around the San Onofre Nuclear-Generating Station in southern California and the Diablo Canyon Power Plant along the central coast.

If you reside or work in the Emergency Planning Zone (EPZ) for the San Onofre Nuclear Generating Station, you may re-

quest a two-day dose of KI. More information is available at (800)550-5234, TTY/TDD (800) 550-5281.

KI should only be taken when instructed to do so by State or local officials.

Some people should NOT take KI, especially those with an existing thyroid gland condition or with allergic reactions to iodine or shellfish.

#### Child's age

One month or less

One month to 3 yrs.

3-12 yrs.

12-18 yrs.

#### Dosage

1/8 of a pill

1/4 of a pill

1/2 of a pill

1/2 -1 pill based on size

#### What KI dose is recommended for pregnant women?

Pregnant women should take the same dose of KI as other adults. However, repeat dosing should be avoided.

#### What should I do now?

Be prepared. In affected areas, you can find information on nuclear power plant emergency preparedness in the Yellow Pages.

Remember that KI would most likely only be effective in an emergency involving a nuclear power plant.

In the event of any type of nuclear emergency you should listen to the information provided by local officials. They will determine whether sheltering or evacuation is the best for your health and safety.

For more information about the potassium iodide program, the Governor's Office of Emergency Services has established a pre-recorded information line. Information is available, 24 hours a day, seven days a week, in English or Spanish, by calling 1-800-550-5234. The hearing impaired TDD/TTY line is 1-800-550-5281.

Information is also available at:

<http://www.oes.ca.gov>

<http://www.fda.gov>

<http://www.nrc.gov>

<http://www.anbex.com>

<http://www.thyrosafe.com>

The information presented in this article was compiled from the Health Physics Society and the Governor's Office of Emergency Services KI Fact Sheet.

## Emergency Response

By Dave Cammall

Environmental Health Specialist III

Saturday, 6 a.m.

I finally get home. I've been out all night at a gas tanker rollover.

I worked all day on Friday chasing down "anthrax" calls. I was all set to go home when the call came in about the gas tanker. Since I was the HIRT Specialist on call, I headed out to assist in the emergency. It took a long time to get there. Once I got there, I helped organize mitigation efforts, coordinated the clean up and made notifications. It was a long night. To top it off, the clean up contractor brought the wrong equipment! It became an even longer night waiting for the equipment to be brought in and for the clean up to be done.



Now I can finally get some sleep after working almost 24 hours straight.

**BEEP! BEEP! BEEP!**

Ah crud, the pager is going off again... What time is it? 6:30 am!!!

What now? A water main broke at the tanker roll over site and they need me back as the site is now flooding. It turns out that it will be another eight hours before I can get home and go to bed. I am actually able to get some sleep until the pager wakes me early Sunday for the next call...

I have been asked many times what it is like to be on the Hazardous Incident Response Team (HIRT). Well, I think I have one of the most exciting and challenging jobs in the County. My primary duty as a member of HIRT is to respond to hazardous chemical emergencies, throughout the entire County. What that means is when we receive a dispatch call for a chemical spill, anthrax scare, illegal abandonment, drug lab dumping, or anything else that can impact people or the environment, we drop whatever it is we happen to be doing and respond to the emergency.

While at the scene of an emergency response incident, the Department of Environmental Health's (DEH) main duties are to coordinate and assist in the spill mitigation efforts. To do this, we determine what type of risk the incident presents to the general public, make notifications directly to the DEH director and many other agencies, ensure that the clean up is done properly and that wastes are disposed of properly. Before leaving the site, we authorize the re-occupancy of evacuated buildings, and we start enforcement actions as needed.

It's pretty exciting when you find yourself in the middle of a group of Fire Chiefs and Police Officers, with news cameras all around, waiting for you to give the final ok on an incident. That's our primary job: responding to chemical emergencies. But, that isn't all we do. We also respond to all non-business related complaints regarding hazardous materials, participate as core members of the County's Metropolitan Medical Strike Team (MMST), train with our counterparts on the San Diego Fire Department Hazmat team, assist the Hazardous Materials Division's (HMD) field inspectors in sampling expeditions, provide training to both County staff and numerous outside agencies, evaluate emergency response equipment, and are heavily involved in planning and implementing security aspects of major events in the County, such as the Superbowl. So as you can see, every day is different for me. Many times, I really don't know where I am going to be or what I am going to be doing that day. There have been days when I have gone from San Ysidro to Oceanside to Lemon Grove and back again. Then there are those days when I never leave the office. It can and does get pretty hectic around here.

I always get asked what is the worst (or best) ER call I have been on? Well, you can decide for yourself. I've been to crystal methamphetamine labs in houses where the children live in filth because the parents care more about drugs than them. I've opened people's mail because they were afraid it contained anthrax. I've climbed on top of rolled over gasoline tankers to drill a hole in the

side. I have put on protective gear and walked through acid clouds. I've hauled drums up canyons when it was a blazing 105F and I have also done it in freezing rain. I've been in the middle of the freeway cleaning up spilled batteries, visited churches and apartments for illegal asbestos removals, and have been dispatched to the airport when it was evacuated for noxious odors. I've had ticks on me, dogs chase me, been threatened and cussed at, and worst of all, had someone expose himself to me.

But, what's it *really* like to be on call after-hours? First of all, being on the HIRT Team after-hours is different from daytime. When you are on after-hours, you are essentially DEH. This means you not only get the Hazmat calls like the few I described, you get ALL the calls. Sewage releases, food borne illness reports, restaurant fires, bee stings, roaches in apartments and cloudy swimming pools to name a few. This is why Environmental Health Specialists need to have their State Registration to be on after-hours. They need to be experts in all aspects of Environmental Health.

In addition, Environmental Health (EH) Specialists that decide to participate on the after-hours HIRT team must realize that being on HIRT means their daytime job has just become busier. HIRT requires a great deal of training, meetings, drills, and the usual dreaded paperwork.

EH Specialists are also required to back up the daytime EH Specialists when necessary. All of this takes time that interferes with the regular inspection activities. Lastly (and to some, most importantly), being on after-hours also means that Specialists give up their social life one week per month. The EH Specialist on call is tied to a pager that can and does go off at any time of the day or night. Imagine being paged out after midnight every night of the week and then having to get up and go work your daytime job. Sometimes, EH Specialists may not even get to bed. They sometimes decide not to go to very many places because they may need to leave as soon as they get there.

And when they go, they take two cars so in case they get paged, their spouse can go home later.

So, it means that sometimes EH Specialists skip parties, Padres games, movies, going out to dinner and their kids' ball games or camp outs, and a lot of holidays. That's right, they also take their turn being on call for Christmas, Thanksgiving, the 4<sup>th</sup> of July, and all the rest. However, they may be able to catch up on those movies they always wanted to see and are now out on DVD while waiting for the pager to go off!

#### What does it take to be on ER?

The HIRT team looks for self-motivated people who can think for themselves, make quick informed decisions when chaos reigns. People who can and will say "no" to a fire chief, but then turn around and work with him. The HIRT team wants confident, self-assured people who will stand by their actions when everyone else second-guesses them. And they need to be willing to mitigate a spill while sucking air through a tin can! It is a big commitment and a lot of work, but it is also a lot of fun!

## Automotive Repair In the 21<sup>st</sup> Century

By Ellen Schulte

### Environmental Health Specialist II

Automotive repair has changed drastically over the last ten years. The advancements in computer technology and its application to car mechanics are just astounding! For example, a 2002 Cadillac Seville has seven computers operating everything from lights on the rear view mirror to the fuel injection regulation. Computers now allow for financial agencies to locate cars through a global positioning system (GPS) for immediate repossession.



Eventually, law enforcement personnel will be able to tap onto a computer and cause an escaping criminal's engine to shut off, thereby eliminating future high-speed car chases. Electrical wiring in vehicles is now almost non-existent due to the use of radio frequencies and fiber optics. The term "Auto Mechanic" really no longer applies (as an "Auto Technician" is quick to correct) as extensive computer skills are required for auto repair today. Current manufacturer's operation manuals, now available on compact discs, allow technicians to simply connect the vehicle computer terminal to a reading device and obtain a diagnosis that is electronically transmitted to the office computer. The computer software analyzes the problem, provides corrective action instructions and the technician can repair the vehicle according to the instructions. Future features on this field may include the possibility of a portion of the repair work being done by the use of robotics to remove and replace entire functional units.

So now you ask, "*With all this technological advancement, why are vehicles still burning inefficient and polluting fossil fuels?*" Well, albeit slowly, a variety of alternative fuels are now becoming available to the public.

**Hybrid cars** greatly reduce emissions of air pollutants, provide substantial fuel economy, and are self-charging (no need to plug in). Most hybrids use nickel-metal hydride batteries whereas fully **electric** (Zero Emission) vehicles may utilize lead-acid, lithium ion or Ni-Cad batteries.

**Natural gas** vehicle fuel can be compressed natural gas (**CNG**) or liquefied natural gas (**LNG**). These too have reduced pollutant emissions. The County has many dedicated CNG vehicles that are used for short trips, as the fuel canister capacity is limited. LNG, on the other hand, allows a longer range before refueling. With LNG powered cars, however, care must be taken not to leave the car sitting out for more than five days as the LNG begins to vent off when the canister is left sitting and warms up. These restrictions on CNG and LNG vehicles made manufacturers develop bi-fuel vehicles where the driver can switch

between natural gas and gasoline. Most natural gas is produced from select regions of the US and Canada. The City of San Diego is investigating extracting natural gas from our local landfills.

**Fuel Cell** technology is the latest alternative fuel soon to be on the market. Prototype vehicles using hydrogen are being tested and are considered Zero Emission Vehicles. One particular fuel cell vehicle has a compressed tank of hydrogen (3,000 psi) and an electric motor. Hydrogen and air are fed through a membrane creating an electrical current that runs the electric motor. The emission is deionized water! The only battery required is a standard 12-volt lead-acid battery to start the car. Any public trepidation about the safety of hydrogen should be diminished by rigorous testing and public education (the famous Hindenburg fire was mainly due to the zeppelin's aluminum fabric coating and not to the hydrogen inside!). Fuel cell technology remains the cleanest burning fuel available and recently received a funding boost from the Bush administration. Hydrogen can be manufactured from gasoline or it can be made through solar stripping of hydrogen from water, an environmentally friendly process.

**Biodiesel** is the only **renewable** alternative fuel on the market and can be used in your existing diesel car. The manufacture of this fuel is so simple you can make it at home in a blender, however, we do not recommend this! Making it involves the simple mixture of vegetable oil (or other fatty oils) and ethanol or methanol. This mixture separates into two layers. The upper layer is Biodiesel and the bottom layer contains impurities (mostly glycerin soap). Commercial manufacturing of biodiesel is being done in the U.S. Midwest green belt. Corn, soybean and cottonseed farmers are the main contributors of plant derived oil and ethanol. Restaurant food grease waste is now being explored as a suitable replacement for virgin vegetable oil in the production



of biodiesel. The beauty of biodiesel is that almost all existing diesel vehicles (even the 2002 diesel Volkswagens) can use it without any major engine modifications. In fact, all snow removing vehicles at Yellowstone National Park run on biodiesel. Locally, a waste hauling company in Chula Vista runs their trash trucks on a biodiesel blend. Although vehicles running on biodiesel are not considered zero emission vehicles, biodiesel burns much cleaner than regular diesel, it emits negligible particulates, small amounts of nitrogen oxides and no sulfur oxides. It smells like French fries! The nitrogen oxides produced can be reduced by use of plant-derived additives (palm oil).

The 21<sup>st</sup> century will continue to bring exciting new technologies in the automotive arena. Especially with the concern for U.S. independence from foreign oil, alternative fuel options are now being looked at as a viable option in supplementing the consumer's demand for fuel.

The use of alternative fuels will reduce the negative impacts of motor vehicles to the environment, save money to consumers and preserve our freedom to move about the country. Please visit the following websites to stay informed of important fuel technology advances:

Alternative Fuel Data Center  
www.afdc.doe.gov

Clean Car Campaign  
www.cleancarcampaign.org

The Biodiesel Board  
www.biodiesel.org

San Diego Regional Clean Fuels Coalition  
www.sdrfvc.org

Clean Cities Program  
www.ccities.doe.gov



## Hybrid Cars Make \$en\$e!

By Michelle Price

Environmental Health Specialist I



Driving a hybrid vehicle allows consumers to save money while preventing harm to the environment. The use of hybrid vehicles not only saves money in gasoline consumption, but also greatly reduces exhaust emissions and the depletion of fossil fuels. For instance, the California Air Research Board has certified the Prius as a Super Ultra Low Emission Vehicle (SULEV). This rating is a California originated designation that is the most stringent in the U.S. for gasoline-powered cars. In general, hybrids use up to 50% less fuel and produce 80% less air emissions.

In the summer of 2001, the Hazardous Materials Division (HMD) was shopping for a vehicle that would be used by Inspectors on the field. Researching hybrid vehicles, the HMD decided to be environmentally conscious and purchased a 2001 Toyota Prius Hybrid Sedan.

Especially now, when the price of gasoline has skyrocketed, the money savings in gasoline costs are substantial. The money spent in gas has been reduced to 50% of that of similar gasoline powered sedan. Furthermore, the use of this vehicle has generated up to 80% fewer emissions than a conventional gasoline fueled car and has used 50% less gasoline.

This is how the average conventional vehicle and the Toyota hybrid compare in fuel efficiency and air emissions:

	Hybrid	Average Conventional Vehicle
<b>Fuel Economy</b> (City & Hwy)	48MPG	18MPG
<b>Emissions</b>	4.0 Tons	10.6 Tons

### What is a hybrid vehicle?

A hybrid vehicle combines "old" technology with new technology by utilizing a gasoline engine, a generator and an electric motor.

Advanced engineering has been able to supplement old technology with new technology by combining a gas engine with an electric motor to create an environmentally advanced, fuel-efficient hybrid vehicle. Aside from electric vehicles, hybrids meet the tightest emission standards in California.

### Why use a hybrid vehicle?

You can save money while saving the environment! When you use a hybrid vehicle, you are saving money in gas, reducing the emissions to the environment and preventing the depletion of fossil fuels. In addition, in July 2002, the IRS certified certain hybrid vehicles to qualify for a "clean fuel vehicle" tax. Driving a hybrid, you get the convenience of using a vehicle that can go long distances without recharging, has the ability to generate its own electricity, can give you a tax break and conserves on fuel consumption.

### How does it work?

Advanced technology allows computer chips to sense when to draw and store energy from batteries. By the use of this technology the computer is able to provide maximum fuel efficiency and minimize fuel emissions.

Through the braking system, wasted kinetic energy is recovered for later use. When the gasoline engine is no longer needed, such as when waiting at a stoplight, the car automatically switches to alternate power systems. The beauty of the hybrid is that driving power is not sacrificed like it happens with electric vehicles. When you need an extra boost of power, the hybrid will have the engine and electric motor working together to give you the needed performance.

### How are emissions reduced in hybrid cars?

Emissions are reduced through an advanced emission purifying system and a fuel injection that atomizes fuel for better combustion.

### Other popular pollution prevention features...

Many of the hybrid vehicles are manufactured with recycled materials, and new recyclable materials. Bumpers, instrument panels and other interior parts are made of a Super Olefin Polymer, which is a highly recyclable material. Other plastics found in the vehicle are made up of recycled Polypropylene.

Saving money and helping the environment are no longer mutually exclusive. Hybrid cars save you money while allowing you to do your part to protect non-renewable resources and minimize pollution to the environment.

## Assembly Bill 2481

By Sylvia Mosse,  
Supervising EHS

Assembly Bill 2481, authored by Assembly Member Frommer, was sponsored by the State Water Resources Control Board. It was signed by Governor Davis on September 26 and became effective January 1.

There are four major areas that this bill addresses which are regulated by the Department of Environmental Health:

Underground Storage Tank (UST) Provisions; UST Cleanup Provisions; UST Grant & Loan Program Provisions; and Certified Unified Program Agency (CUPA) Provisions.

It is important to understand the existing definitions for the terms "UST" and "UST System." The term "UST" includes the underground storage tank and piping, whereas the term "UST system" includes tank, connected piping, ancillary equipment, and containment system (i.e., under dispenser containment, turbine sumps, fill sumps).

### AB 2481-UST Provisions

New construction standards have been

developed for tank installations after **July 1, 2003** (HSC 25290.1):

- UST system must be liquid and vapor tight
- The "Piping" definition has been expanded to include underground portions of vent lines, vapor recovery lines and fill pipes
- All portions of new UST systems must be double contained
- UST interstitial space must be under constant vacuum or pressure (brine-filled method is acceptable)
- An annual tightness test for new underground piping will no longer be required.
- Before the UST is placed into use, it must be tested by one of the following methods:
  - ◻Enhanced leak detection
  - ◻Inert gas pressure test
  - ◻Equivalent test method approved by the SWRCB

### Be advised:

**If the installation of a UST is not substantially complete by July 1, 2003, the new standards for USTs installed on or after July 1, 2003 will apply.**  
**"Substantially complete" would be the installation of the tank and piping.**

## Start Your Upgrades Early!!!



**Due to these new regulatory requirements,** the number of upgrade applications received by the HMD UST Plan Check section has increased substantially.

This means that contractors also have an increased workload. It may be difficult for you to find an available contractor if you wait too long before starting your project, and inspection dates may be booked weeks in advance. Start your upgrades earlier to prevent unexpected delays that could make you subject to the new standards for USTs installed on or after July 1, 2003.



**Other UST Provisions effective January 1, 2003:**

Requires that existing and new spill containment structures, otherwise known as spill buckets, be tested annually. (HSC 25284.2)

**Enhanced Leak Detection (ELD) requirements:**

- By June 1, 2003, the SWRCB must notify owners and operators of UST systems with secondary containment that are located within 1000 feet of a drinking water well of the requirement to test the UST system **once** using ELD. (HSC 25292.5(a), (b)). The one time only test must be completed on or before Jan. 1, 2005.

- If the results of the tests indicate that any component of the UST system is leaking either liquid or vapors, the operator must take appropriate actions to correct the leakage and retest the UST system with ELD until system is tight.

**Licensed tank testers are required to:**

- Sign reports under penalty of perjury.
- Maintain tank test report for three years (HSC 25284.4 amended).

**Changes to the emergency generator tank (EGT) systems (HSC 25284.1 amended) include:**

- Unburied fuel piping connected to an EGT system is excluded from the definition of UST, if the owner or operator conducts visual inspections of the piping each time the system is operated, but no less than monthly.
- Tanks within structures may avoid secondary containment testing if tank/piping is inspected visually every month.
- Allows enhanced leak detection instead of secondary containment testing.

**Red tag authority given to local CUPA (HSC 25292.3)**

- Red tag is placed on fill pipe of non-compliant UST to prohibit delivery of fuel.
- Replaces 1998 upgrade compliance certificates.
- Used only for significant violations (SWRCB to define).

- Upon discovery of a violation which is an imminent threat to human health, safety or the environment, red tag will be affixed immediately.
- Without imminent threat, the owner or operator has seven days to correct violation or have the UST red-tagged.
- The CUPA must re-inspect within five days of receiving notice that a violation has been corrected.

**AB 2481 UST Cleanup Provisions**

Move corrective action requirements in HSC Chapter 6.75 to Chapter 6.7 (HSC 25292.3)

Increases UST Cleanup Fund eligibility

- Site is eligible if new owner is not affiliated with, or a relative of the previous ineligible owner,
- Leaks began before the property purchased, and
- New owner obtains permits, pays applicable deductibles and any owed storage tank fees.

**AB 2481 UST Grant and Loan Program Provisions**

- Reduces minimum grant from \$10,000 to \$3,000.
- Authorizes grants for enhanced leak detection testing required by law.
- No longer requires small businesses to incur debt prior to becoming eligible for the program.

**AB 2481 Certified Unified Program Agency (CUPA) Provisions**

Authorize CUPAs to issue Administrative Enforcement Orders for violations of Chapter 6.7 and 6.95 (HSC 25404.1.1)

- Specifies procedures for hearings.
- For minor violations, CUPAs may issue notice to comply as specified.

The California CUPA Forum Board and Cal-EPA are working together to develop the AEO guidelines for the two added CUPA programs to ensure uniform implementation of the AEO process for all programs. The SWRCB has begun the process to develop the definition of "significant violations," working with CUPAs and other interested parties.

For more information contact the UST Plan Check desk at (619) 338-2207

You may obtain a copy of AB 2481 from the State Water Resources Control Board's website: [www.swrcb.ca.gov/cwphome/ust/](http://www.swrcb.ca.gov/cwphome/ust/)

**Existing RUST Low Interest Loan Program**

- Eligible borrowers: Small business with petroleum USTs.
- Eligible projects: Upgrade, repair, or removal of USTs used to store petroleum products. May also include minor cleanup.
- Loan terms: low, fixed rates, 2% loan fee, loan amounts from \$10K to \$35K, up to 100% financing and 20 years to repay.

For more information about these loans contact:  
California Southern  
Small Business Corporation  
600 B Street, Suite 2450  
San Diego, CA 92101  
(619) 232-7771

<b>Matt Trainor</b> Supervising EHS Operation/Permits	<b>Ron Yonemitsu</b> Senior Health Physicist Radiological Health Program	<b>Sylvia Mosse</b> Supervising EHS UST Program
<b>Ed Slater</b> Supervising EHS North County	<b>Michael Dorsey</b> HMD Chief	<b>John Misleh</b> Supervising EHS East County
<b>John Kolb</b> Supervising EHS South County	<b>Mike Handman</b> Supervising EHS Emergency Response Team	<b>Mike Vizzier</b> Supervising EHS Central County