

Acton • Mickelson • Environmental, Inc.



August 2006 Newsletter

From the President

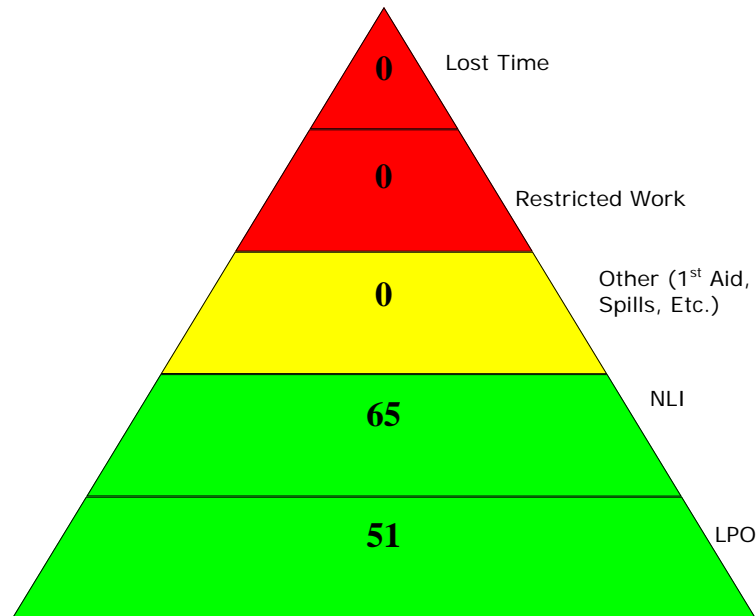
AME is advancing our LPS implementation with improved SPSAs, greater numbers of LPOs and NLIs leading to improvement of our JSAs. We are all looking forward to finalization of the LPIS database interface and getting our hands on these tools. While we are focusing on tool use we must remember that

the ultimate goal is that **No One Gets Hurt**. Please take some time to review where we are and what we have yet to do as we close out 2006 activities. School is starting, holidays are approaching and we must not let down our focus on the goal of no AME employee or subcontractor injuries. Thank you for your great work and positive attitude.

Safety Matters

2006 YTD (through July)

AME Total ExxonMobil Hours Worked YTD (2006): 9,493



July Health & Safety Summary

We had a productive month of field work in July, another month in which we can proudly say "no one got hurt". In 502 hours of field work for ExxonMobil, including 55 subcontractor hours, we produced 14 Near-Loss Incident (NLI) reports and 13 Loss Prevention Observation (LPO) reports. This resulted in

a ratio of one LPO report for every 39 field hours worked, our lowest number yet, breaking the old record low ratio set in June 2006, and right where we want to be. Kudos to our field teams, their supervisors and their project managers for this great effort. It truly reflects the established commitment of AME personnel to health and safety at all levels in our company.

Near Loss Incident

We recently had a near loss incident where an employee was calibrating field instrument (FID) and connected a regulator with no shut-off valve (constant flow regulator) to the calibration cylinder. All cylinder regulators used by AME should have shut-off valves. Cylinder regulators without shut-off valves should be discarded.

LPS Program Implementation Update

By Grace Willis

AME is now in the testing phase of our client-specific custom interface for tracking LPS processes.

On July 25, AME's management information systems (MIS) team met with Mr. Joe Smyth from LPS, Inc. in El Dorado Hills to install the LPIS program, train the LPS team and key personnel on maintenance and use of the program, and discuss general LPS theory and practice.

LPIS is an SQL-based database that supports the LPS process and generates all standard LPS reports. AME's MIS team has created a client-specific, server-based interface that allows tracking of all criteria requested by our clients in addition to those captured by LPIS. We can now produce client-specific LI/NLI and LPO reports as well as JSAs.

Upcoming goals include having the database produce our internal tracking metrics reports and implementing the program with field personnel to allow instant access to information and aid in process initialization. Our interface has a built-in calendar function that will schedule tasks and due dates and send notices to field personnel via cell-phone text messages.

Dr. Jim Bennett, LPS originator, will be in our El Dorado Hills office in early 2007 to deliver a stewardship workshop to AME employees and key clients (the specific date will be confirmed by August 25).



New Employee Welcome

On August 28, 2006 Michael Redfern will be joining the AME team. Michael will be assisting Eric Chase in our LPS compliance effort as we expand implementation of LPS to all our clients. Michael received his B.A. in Environmental Studies from UC Santa Barbara and has six years of experience, most recently as a District Safety Manager for Home Depot. He will be working in the El Dorado Hills office. He is knowledgeable in most areas of health and safety compliance, having a good background in environmental compliance associated with USTs, ASTs, Hazardous Materials Business Plans, SPCC plans, DOT regulations, and MSDS systems. He will be working on LPS documents (JSA, LPO, LI/NLI reports) including processing, reviewing and tracking. He will also be assisting in monthly LPS metrics tracking, Health and Safety Plan review and updating, and soon in LPS training. Please introduce yourselves to Michael when you see him.

City of Galt



AME was awarded a one year contract extension to perform ground water monitoring at the City of Galt Waste Water Treatment Plant. This is our second contract extension for this work. Zachary Guthmiller has done a great job coordinating and completing the ground water monitoring in a timely manner and without the introduction of coliform bacteria experienced by the prior consultant. The following excerpts from an August 16 email from John Griffin, P. E. Associate Civil Engineer reflect well on AME and our work on behalf of the city.

Barbara, Good morning. I received a copy of the signed contract amendment. I am very excited and grateful to be working with AME for the next 12 months... John

Conference News

On November 6-7, 2006 the JW Marriott Hotel in Houston, Texas is hosting the Petroleum Hydrocarbons

and Organic Chemicals in Ground Water: Prevention, Assessment, and Remediation Conference. Three papers for presentation, written by AME staff, were accepted to be included at the conference.

- Improving LNAPL Characterization Using Petroleum Exploration Tools, Jeffrey A. Johnson, Ph.D., PG, and Meng Ling, Acton Mickelson Environmental, Inc.; Mark E. Lewallen, ExxonMobil Global Remediation; David W. Sweeten, PG, Blasland, Bouck & Lee
- Ground Water Monitoring Program Optimization at an Active Industrial Terminal, Meng Ling, Jeffrey A. Johnson, Ph.D., PG, and Jim Twiford, Acton Mickelson Environmental, Inc.
- Differentiating Anthropogenic and Natural Hydrocarbon Releases, Jeffrey A. Johnson, Ph.D., PG, Acton Mickelson Environmental, Inc.; Michael L. Hagood, Atlantic Richfield Co. (a BP affiliated company)

Computer Tech Tips

Courtesy of Tao Chen:
Security

- Do not install both McAfee and Norton software on the same computer at the same time
- Recommended antivirus software McAfee
- ENABLE the Windows firewall (Do NOT use McAfee firewall, not necessary)
(if people really want to use McAfee or Norton firewall, need to turn on the share-file port in the software)

Updates

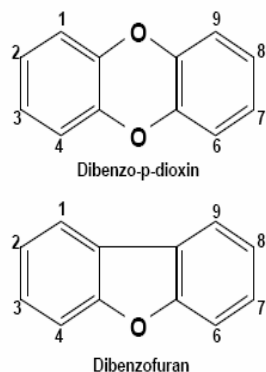
- Allow your computer to automatically update software
- Recommend updating *Microsoft* software at least 1X a week

Basic Knowledge of Dioxins

Written By Chun Yen Wong and Jeffery A. Johnson

The term dioxin is generally used to refer to a family of chemical compounds, known as polychlorinated dibenzo-para-dioxins (PCDDs), polychlorinated dibenzofurans (PCDFs), and certain polychlorinated biphenyls (PCBs). Basically, all dioxins have the same carbon-oxygen basic structure and geometry with chlorine atoms attached to various carbon atoms (Figure 1).

Figure 1. Structures of the Dibenzo-p-dioxins and Dibenzofurans



http://www.oehha.org/air/chronic_rels/pdf/chlordibenz.pdf

Chlorinated dioxins and furans are usually discovered as by-products from various combustion and chemical processes. For examples, PCDDs are generated during incomplete combustion of chlorinated materials such as solid waste, sewage sludge; chemical manufacturing of chlorinated phenol, and paper pulp bleaching with chlorine. The human health and ecological risks due to dioxins exposure have been the subject of a number of state, federal and international regulations. USEPA concludes that dioxins likely increase cancer incidence, and World Health Organization (WHO) classifies 2,3,7,8-TCDD as a probable human carcinogen.

The toxicity of dioxin of different dioxin compounds varies upon the chemical structure. In particular, the toxicity is a function of the strength of binding to the Aryl hydrocarbon receptor protein that is present in all animal species. USEPA has conducted three epidemiological studies of dioxins exposure. The results indicate that the maximum likelihood estimates for average body burden yielding 1% added risk for lung cancer and total cancer response are in the range of 6-80 ng/kg and in the range of 32-250 ng/kg, respectively (USEPA,2000). The possible consequences resulted from dioxin exposure include biochemical effects such as loss of plasma membrane EGF receptor (Choi et al., 1991; Hudson et al., 1985), chloracne, known as skin inflammation, and etc..

Understanding the potential dioxins exposure routes is an effective approach to minimize the risk. In general some individuals or groups may be exposed to dioxins from discrete sources or local pathways. Because

dioxins accumulate in fats, consumption of fish, red meats and milk have been identified as pathways. The exposure routes of greatest concern are dietary and breathing dioxin-laden air. The following table provides results of a study of the estimated dietary intake of 2,3,7,8-TCDD from different foods (HKEPD, 2000).

The average content of 2,3,7,8-TCDD in various foodstuff in the United States

Food	TCDD (pg/g)
Ocean fish	500
Meat	35
Cheese	16
Sour cream	10
Cream	7.2
Ice cream	5.5
Cottage cheese	2.1
Milk	1.8
Coffee	0.1
Orange juice	0.2

In short, all modern humans receive (at least) a very small daily dose of dioxin. The dose-response of human health to a certain lower dose range of dioxin is still unclear.

References

USEPA, (2000) Draft Dioxin Reassessment Documents; Dose-Response Modeling for 2,3,7,8-TCDD, Toxic Equivalency Factors (TEFs) for Dioxin and Related Compounds and Integrated Summary and Risk Characterization for 2,3,7,8- Tetrachlorodibenzo-p-Dioxin (TCDD) and Related Compounds. Federal Register: October 4, 2000 (volume 65, number 193). <http://cfpub.epa.gov/ncea/cfm/recorddisplay.cfm?deid=55265>

Choi, EJ; Toscano, DG; Ryan, JA; et al. (1991) Dioxin induces transforming growth factor-alpha in human keratinocytes. J Biol Chem 266:9591-9597.

Hudson, LG; Toscano, WA, Jr; Greenlee, WF. (1985) Regulation of epidermal growth factor binding in a human keratinocyte cell line by 2,3,7,8-tetrachlorodibenzo-p-dioxin. Toxicol Appl Pharmacol 77:251-259.

Hong Kong Environmental Protection Department (HKEPD), 2000. An assessment of dioxin emissions in Hong Kong.

Quotes from Grace Willis' Desk

"The world cares very little about what a man or woman knows; it is what the man or woman is able to do that counts." - Booker T. Washington

"Many a false step is made while standing still." – Chinese Proverb

"Every time you win, it diminishes the fear a little bit. You never really cancel the fear of losing; you keep challenging it." – Arthur Ashe

Humor



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