

# Acton • Mickelson • Environmental, Inc.



## **November 2006 Newsletter**

### **From the President**

Thank you to all the AME professionals who spent many hours contributing to the completion of the recent ExxonMobil RFP. It was a daunting task in many respects. We look forward to a positive response to our submittal. Thank you also for getting to November 2006 without a safety incident or injury. Keep it up and very soon we will all be celebrating another year during which **No One Got Hurt!**

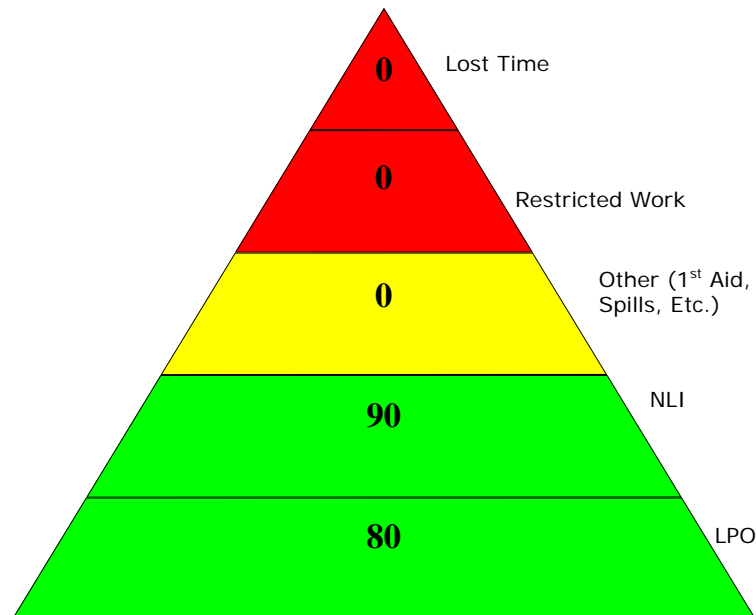
### **From the Corporate Health & Safety Officer**

**Written By Michael Acton:** I don't know about you, but at this time of the year my thoughts turn increasingly toward spending time with our extended

family and enjoying all the wonderful food (who said I wouldn't be able to finish that second piece of pie). With these thoughts and the pressures we sometimes feel in attempting to meet our familial obligations, it becomes increasingly difficult to focus on conducting our day to day work and personal tasks in the prescribed safest manner. With this in mind, remember to take that extra moment and Assess, Analyze, and Act before you embark on an activity. All of us taking those extra moments will help allow for this busy time of the year to be safe and incident free. Bring on the turkey (and the pie a la mode)!

### **Safety Matters**

2006 YTD (through October)  
AME Total ExxonMobil Hours Worked YTD (2006): 12,630.5



## October Health & Safety Summary

AME performed 1,110 hours of field work in October and once again AME can say, "NO ONE GOT HURT." 1,110 field hours, including 142 subcontractor field hours, AME produced 13 LPOs and 6 NLIs. This resulted in a ratio of one LPO report for every 85 field hours worked. Keep up the good work and thank you all for the sustained effort in driving the LPS program. It truly reflects the established commitment of AME personnel to health and safety at all levels in our company.

### Driving Safety

Due to the findings of a recent NLI, add inspection of the airbag switch to your pre-drive inspection checklist. Some AME trucks have a switch on the passenger side air bag rather than an automatic weight activated air bag. Please ensure that all passenger side airbag switches are in the "on" position before you drive. Please take the time to inspect the truck that you drive next and ensure that this switch is in the "on" position. Thank you for driving safely and keep up your safe driving habits.

### Utility Clearance Backfill Jams Drilling Program - Lesson From the Field

**Written by Jeff Heglie:** As we discussed briefly during our last safety meeting, sometimes a small detail can lead to lost money and increased field time – and the latter means more exposure to risk in the field. While installing direct push borings recently in a busy street near the project site we employed an air knife to complete the utility clearance protocol. Once the excavation with an air knife was done, the borings were to have been temporarily backfilled with the soil

cuttings and the pavement patched. The contractor used dry bentonite chips in one borehole instead of soil cuttings as instructed. He also failed to add water to hydrate the bentonite chips. (The remaining locations were backfilled correctly.) Later, when the direct push drill rod was advanced to install a small-diameter monitoring well, the bentonite chips fell into the annular space between the drill rod and the borehole wall. The bentonite chips locked the drill rod tightly in place. After over a day of extra work, including a Saturday, the drill rod was freed with a hollow stem auger rig and the well installed. (By the way, a similar "sand locking" technique is used to pull production well casing out of the ground! The only difference is that the sand and pull rod are inside the well casing.)

### Well Caps And Locks Are Critical Safety Equipment: Use New Ground Water Level Form

**Written by Jeff Heglie:** Well caps and locks are critical safety equipment. The critical nature of these items is most particularly evident at operating facilities or sites without access control. Well caps must be secure and liquid-tight, and wells or well head monuments locked. The condition of wells should be regularly inspected; at ExxonMobil sites follow the ExxonMobil OIMS protocol for critical safety equipment. AME has a revised Ground Water Level Data form with a column to note whether the well head is secure. This will suffice to document the inspection. Please discard old forms and use the new ones at all sites, and email me or Toby if you need a copy. (On a related item, filling in parts of the form in advance such as site name, well number, and reference elevation is a good practice, while filling in columns with observation data such as LPH thickness is not.)

## Trends Analysis

Production of Near Loss Incident Reports and Loss Prevention Observations is as follows:

Month	NLI's Produced*	LPO's Produced*	Field Hours Worked*	Field Hours per LPO*
September	9	10	522	52.2
October	6	13	1,110	85.4

\*Major Projects plus Retail combined

The following table presents the distribution of root causes identified in LPOs.

LPO Root Causes Identified	September	October
1. Lack of Skill or Knowledge	0	2
2. Takes More Time or Effort	11	2
3. Short-cutting tolerated	0	0
4. Procedure Not Followed/No Incident	4	12

5. Lack of or Inadequate Procedure	3	4
6. Inadequate Communication	0	0
7. Inadequate Tools/Equipment	0	8
8. External Factors	0	0

The following table presents the root cause distribution for NLI's.

NLI Root Causes Identified	September	October
1. Lack of Skill or Knowledge	1	4
2. Takes More Time or Effort	10	5
3. Short-cutting tolerated	0	0
4. Procedure Not Followed/No Incident	1	0
5. Lack of or Inadequate Procedure	13	3
6. Inadequate Communication	0	0
7. Inadequate Tools/Equipment	0	1
8. External Factors	0	0

As can be seen for September and October these root cause distributions are similar, and they are similar to the distributions for the first two quarters of 2006, with higher numbers in the personal factors group (1-4) and lower numbers in the job factors group (5-7). We continue to see no root cause 3 incidents or root cause 6 incidents.



### **Sampling Monitoring Wells With Sheen**

**Written by Jim Twiford:** Sheen is a qualitative observation term. A qualitative observation of sheen in a bailer or on an interface probe is not to be used as a deciding factor on whether to collect a sample from a monitoring well. Unless otherwise directed by our client, AME policy is to go by the quantitative measurement from an interface probe and sample a monitoring well if LPH is not measurable (i.e., less than 0.01 foot). Talk to your project manager if you have any questions on this policy or its implementation.

### **Awards**

While attending the annual meeting of the Association of Environmental and Engineering Geologists in Boston, Massachusetts, AME's Eric Chase received a Presidential Citation for service to AEG. The award came from AEG President Dr. Darrell Schmitz. Eric is a senior project manager in AME's El Dorado Hills, California office. He is a Professional Geologist, a Certified Engineering Geologist, and a Certified Hydrogeologist in California. Eric serves on AEG's national Board of Directors, and has been a full member of AEG for 26 years. The award was presented at the annual AEG awards luncheon. Congratulations to Eric!

### **Underground Service Alerts**

**By John Matthey and Brian Richardson:** The El Dorado Hills office is arranging, through USA North, to have our Underground Service Alert (USA) tickets emailed to us after they are called in. This will give us a document for the file with the ticket number, dates, and what utilities were notified. USA North covers central and northern California and Nevada.

For parts of Montana, all of Washington, and all of Oregon a USA equivalent can be obtained through the "Utility Notification Center". However, regional phone banks exist, so accessing the website <http://www.callbeforeyoudig.org/> is a good idea to verify what number to call. The company also has an option for "ITIC", which can be registered for to perform ticket procurement via the internet.

### **Laboratories for ExxonMobil Projects**

TestAmerica – Nashville is the primary laboratory for ExxonMobil projects.  
 TestAmerica – Morgan Hill is an approved secondary laboratory, so we have been allowed to use this lab for Oakland and Watsonville.  
 TestAmerica – Sacramento is not an approved ExxonMobil laboratory; please do not send ExxonMobil samples to this lab.

We have special exceptions to use other laboratories for Culver City and Portland; but otherwise, we need to use TestAmerica – Nashville for ExxonMobil projects. TestAmerica pays for shipping of samples and for courier service where appropriate. If we gain additional ExxonMobil business as we believe may be possible, we will probably be doing a lot of driving to FedEx offices to ship samples.

## **Subcontractors**

### **Written by Ellen Frosch**

When planning your field work events, don't forget to plan for setting up a subcontract agreement with all the subcontractors you will utilize.

Even though many subcontractors have worked with us before on projects, it is almost always necessary to establish a separate agreement for the work being scheduled. Subcontractors must agree to

- AME requirements
- Client requirements
- Site requirements
- Access requirements

Most of our clients have specific language that must be included in subcontract agreements. Additionally, many project sites have specific language unique to that project that is incorporated into the agreement. Consequently, we have subcontract agreements that are tailored to the specific needs of each client and site. (Example: Having a subcontract agreement with a driller for a Georgia -Pacific project does not include all the necessary language and requirements for using the same driller on an ExxonMobil project.)

When scheduling a subcontractor, I need to know the site information, the scope of work, the agreed upon price (or pricing schedule), and the time frame for when the work is planned. With this information, a subcontract agreement can be prepared and executed between AME and the subcontractor. (Barbara Mickelson and Michael Acton are the only individuals that can sign for AME.)

Work at the Port of Oakland and Valero Benicia requires coordinating site access for the individual employees (AME and subcontractor). You should allow extra time for this (1 week for Port of Oakland, 2-3 weeks for Valero Benicia).

## **Dijon Mustard and Ground Water – The Correlation**

**Submitted by Jeffrey Johnson:** Today, Dijon is a vibrant European city recognized by tourists for its charm and location within the Burgandy wine making region of France. However, only about 150 years ago it was recognized in a much poorer light. The city was dirty and was known for some of the worst water in Europe. That was until, a young college graduate, Henry Darcy, arrived in 1834. In that year, he wrote a report to the mayor and city council on the necessity of providing clean water to Dijon. His design was

comprehensive and state-of-the-art. It entailed the collection and transport of clean water via an underground aqueduct from a spring over 7.9 miles away. The aqueduct flowed into a covered 200,000 cubic feet reservoir and another nearby reservoir. Over 90,000 feet of underground lines were then used to distribute the water to hospitals, major buildings, and public fountains. In particular, over 140 fountains were constructed along the distribution line for use by the general public. By the early 1840's the project was well underway and clean water was available. It was his work on the Dijon project that provided Darcy much of the empirical basis for his theoretical work that would change our understanding of groundwater movement.



In addition, Darcy's water project provided a new economic boost to the city of Dijon. New businesses developed and not surprisingly, the culinary markets of the city flourished. Jean Naigeon capitalized on the growth and began experimenting with a new recipe for mustard. In 1856 he created "Dijon Mustard," which remains a top seller 150 years

later. Hence, the next time we visit the grocery store and see the jar of the brown mustard – let us remember Henry Darcy – for without his accomplishments in cleaning up Dijon's water we might be without one of our favorite flavors.

## **Turbidity and Field Duplicates**

**By Grace Willis:** During this season of Thanksgiving, I would like to say Thank You to all of you who have helped me and the other Houston personnel by keeping us informed of your projects and getting your field notes and other measurements to us in a timely fashion. When I have field notes in my possession, data validation can be completed very quickly, in fact, for the last three sampling events data validation reports were issued within 24 hours of receiving the lab reports.

Occasionally, they will take longer, a lot longer, when the parameters for validation don't meet all acceptable criteria. You may or may not know that the parameters for data validation are: consistency, completion, method blanks, laboratory control spikes, matrix spikes, surrogate spikes, trip blanks, and field duplicates.

This brings me to the story about the really bad field duplicates and the lesson I learned. I recently had a fairly large and complex sample group to review. All of the parameters were fairly normal except for the field duplicate comparisons. I spent hours investigating why the results were so varied. I confirmed that I had the correct pair, I called the lab for any errors, and I checked the EDD. Upon closer study of the field notes

I realized that the turbidity of the samples in question exceeded 500 NTU.

After researching the affect of turbidity on analytical results I discovered that basically some analytes are more affected than others. Semivolatile organics, including TPHd, TPHo, PAHs, are particularly sensitive to turbidity, since these higher molecular-weight compounds have a greater tendency to adsorb to solids (i.e. clay). Obviously, analysis for total metals (unfiltered) will vary wildly.

TestAmerica provided this comment: "*Turbidity may cause wide variations in some results. It depends on the cause of the turbidity and the analyte(s) of concern. Samples for duplicates must be equal, i.e. homogeneous, in order for the sample to be considered a true duplicate.*" Prior to this event, reviewing and reporting turbidity was not part of my QA/QC and data validation process. Needless to say, now it is.

So guys, here's my suggestion. Next time you are in the field about to collect your duplicates, please confirm that the turbidity is low. If it turns out that the location you chose for collecting field duplicates has a high turbidity reading, please modify your sample plan and choose another location, otherwise the collection of a field duplicate is pointless. The reason for collecting field duplicates is to measure the precision of the sampling and analysis process, not the variations in turbidity.

Happy Thanksgiving to all.

### **Tips for Preventing the Flu**

#### **Tips Courtesy of U.S. HealthWorks Medical Group**

Are you protected? Influenza can cause days of fever, chills, cough, sore throat, head and muscle aches...even hospitalization. Protect yourself and reduce the risk of exposing your family, friends, and co-workers this flu season.

The best way to prevent getting the flu is to get vaccinated. Along with your vaccination, the following tips will help keep you healthy this flu season:

- Wash your hand thoroughly with soap and warm water. *Washing your hands often will help protect you from flu germs.*
- Control your stress level. *Prolonged stress levels can affect your immune system. To manage your stress, find a balance between work, exercise, and personal time.*
- Get lots of rest. *Make sure you are rested. Sleep deprivation may slow your ability to stay alert and make you vulnerable to the flu and other viruses.*
- Cover your mouth and nose when coughing or sneezing. *Use a tissue to help prevent passing the germs to those around you.*
- Avoid touching your eyes, nose, or mouth. *You can infect yourself unknowingly touching someone with flu germs and then touching your eyes, nose, or mouth.*

- Avoid direct contact with people who are sick. *You'll also want to keep your distance from others if you are sick.*

Q: What is the best way to prevent the flu?  
A: *Protect yourself and reduce the risk of exposing your family, friends and co-workers by getting a flu shot.*

Q: When is the best time to get a flu shot?  
A: *The flu shot can be given any time during the flu season. If you are at high risk, get vaccinated early in the season. It is best not to delay; but if you do, it's still better to get it late than not at all.*

Q: Even if I get a flu shot, can I still get the flu?  
A: *No vaccine is 100% effective, but generally, the flu shot protects most people. Other viruses also circulate during flu season, giving you symptoms that can feel like the flu. The flu shot will not protect you against those.*

Q: Will I catch the flu if I come in contact with people who are sick?  
A: *Flu germs are spread through coughing, sneezing, and touch. Washing your hands often may help prevent the spread of flu germs.*

Q: How serious is the flu?  
A: *The flue can lead to pneumonia and has been reported to have hospitalized 200,000 and killed 36,000 people each year.*

Q: What are the symptoms?  
A: *Symptoms include: fever, cough, sore through, headaches, muscle aches, and fatigue. Some may also experience vomiting and diarrhea.*

### **Important Dates to Remember**

**December 1** – Timesheets/Expense Reports/Equip Usage Due

**December 5** – All Subcontractor/3<sup>rd</sup> Party Invoices Due for Work conducted in November

**December 18** - Timesheets/Expense Reports/Equip Usage Due

**December 25 & 26** - Office Closed for Holidays

**January 1** - Office Closed for Holiday

**Floating Holiday** – Be sure to use your floating holiday before the end of the year.

AME Calendar – To assist in scheduling, keep the calendar current by including Jennifer on any information related to your out of office schedule (field, travel, vacation, etc.)

## Reminder

**Courtesy of John Matthey:** It is now California law to turn your headlights on if your windshield wipers are running.

## Quotes

### **Submitted by Grace Willis**

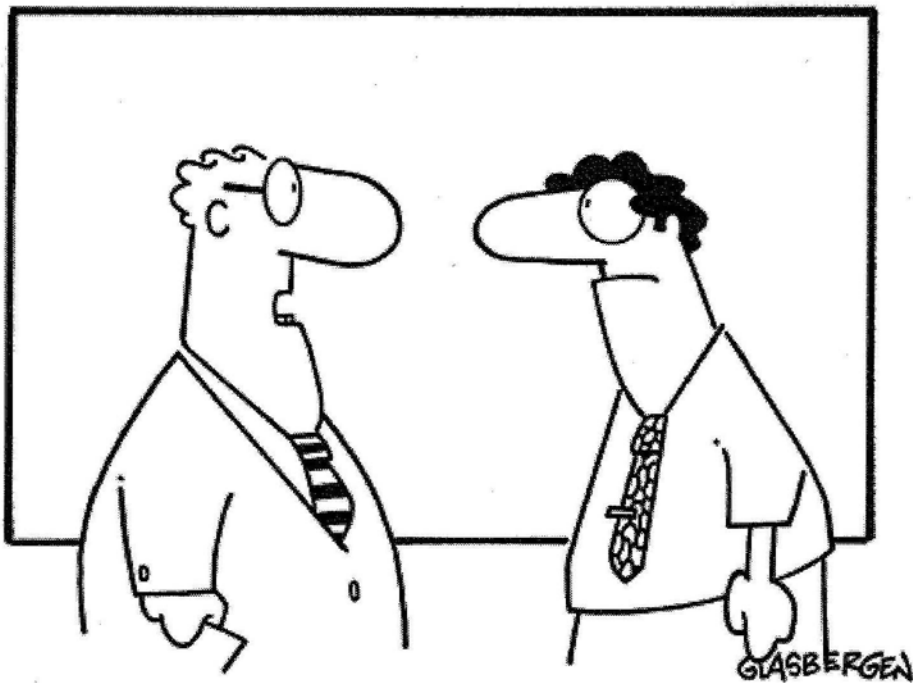
"Efforts and courage are not enough without purpose and direction." – John F. Kennedy

"Little minds . . . are subdued by misfortune . . . Great minds rise above them." – Washington Irving

"A genius is a talented person who does his homework." – Thomas Edison

## Humor

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**"We are a company, not a military organization.  
Making you watch a PowerPoint is not a  
violation of the Geneva Convention!"**

