ENVIRONMENTAL NEWS, REGULATIONS, & TECHNICAL

January 2008

# Atlanta Environmental Management, Inc.

# Newsletter

## Inside this issue:



## Tom Longo: AEM's Graphics Designer

Tom Longo is AEM's Graphics Design Manager and is responsible for preparing all of our graphics and drawings. His attention to detail and his ability to present complicated information in a clear and easily understandable format are appreciated by our clients. Several of our clients were so impressed with maps and figures that Tom prepared on AEM projects that they asked Tom to prepare maps and figures for projects being performed by other consultants.

Tom has 17 years of experience related to graphics design and computer-aided drafting and has been with AEM since 1997. Tom's routine responsibilities included generating civil and mechanical drawings, illustrations, 2D and 3D renderings, and photographic manipulation. He is also responsible for the production of all marketing materials, including brochures, web page graphics, logos, documents, and presentations. In addition, Tom manages AEM's web page, our computer network, and computer file management, which includes our backup systems. Because of his extensive expertise with computers, Tom also trains our employees in the use of computer software and is given the task of resolving computer and software problems.

Before joining AEM, Tom worked for several local companies where he was involved in computer-aided drafting, including a major project where he generated drawings for more than 650 cellular sites and managed the computer file management system.


## New OSHA Rule: Employers to Pay for All Employee Protective Equipment

After being proposed more than eight years ago, on November 14, 2007, a new rule was announced regarding employer responsibilities regarding payment for personal protective equipment ("PPE"). This rule requires employers to pay for almost all PPE that is required by OSHA's general industry, construction, and maritime standards. Enforcement of the new rule will be delayed until May 15, 2008, to afford employers time to modify their existing policies and to provide the necessary equipment.

OSHA developed this rule to require employers to pay for all PPE instead of placing this burden on the employee. When employees pay for their own PPE, it is believed that they are more likely to purchase the wrong equipment and may use the equipment well beyond the expected service life. OSHA believes that employers are more likely to purchase, maintain, and routinely replace appropriate equipment.

The new rule requires that employers pay for PPE but it does not require equipment where none was required previously. Also, the rule only addresses PPE that is necessary in order for the employer to be in compliance with existing OSHA standards.

The new rule includes a number of exceptions for certain ordinary equipment, including the following:

**Non-Specialty Safety-Toe Footwear:** Employers may not be required to pay for non-specialty safety-toe protective footwear, including steel-toe footwear, if the employer permits this equipment to be worn off the job site. If the employee is required to keep safety-toe footwear at the workplace, the employer must pay for it.

**Non-Specialty Prescription Eyewear:** Like the example above, this exception applies only if the employer permits eyewear to be worn off the job site. If the employer requires employees to keep eyewear at the workplace, the employer must pay for it.

# Vapor Intrusion into Buildings and Structures

U.S. EPA and many states have addressed the intrusion of volatile organic chemicals into buildings and structures in a number of regulations, including RCRA and CERCLA. However, in recent years the potential for vapor intrusion has become a significant concern for Brownfield sites and property development. Although vapor intrusion is a significant concern, the investigation, evaluation, and remediation of this potential is often relatively simple.

Vapor Intrusion results from the migration of volatile chemicals from the subsurface into buildings or structures. Chemicals of concern include volatile organic compounds, some semi-volatile organic compounds, and even some inorganic compounds such as elemental mercury and hydrogen sulfide. Once entering a building, such chemicals can degrade indoor air quality and result in environmental and health-related concerns among building occupants, businesses, and other property owners. In some cases, developers and owners can also face liability issues.

For vapor intrusion to exist, there must be a source, a building or condition of exposure, and a pathway from the source of vapors to the building or exposure point. Therefore, the first step necessary to address vapor intrusion is usually a review of the site history to determine whether past activities may have resulted in the release of volatile compounds to the subsurface. This condition is usually addressed as part of a Phase I Site Assessment, which documents site history. In some cases, vapor intrusion may originate from adjacent properties or through the migration of groundwater, for example methane gas from a landfill.

Assessment of past use can provide an indication of the potential for vapor intrusion because this condition is typically associated with certain chemicals, such as petroleum products, chlorinated solvents, and other volatile compounds. These chemicals are associated with former gas stations, bus stations, dry cleaning facilities, automotive repair shops, and other sites where petroleum products or solvents were stored, handled, or transferred.

The movement of vapors through the subsurface is dependent on certain conditions such as a high groundwater table that effectively "traps" vapors in soils. Coarse-grained soils provide a pathway for vapors to migrate, sometimes over great distances. Generally, vapors do not readily migrate through very fine-grained soils such as clay or bedrock, except when fractures are present.

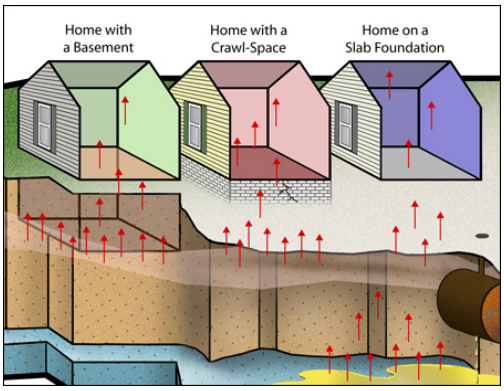
Pathways into buildings include foundation cracks, holes in floors, and small gaps around pipes and utility lines entering buildings. Migration can also be directly into buildings with or without basements. While vapors may enter a building in low concentrations, they can accumulate at higher concentrations and can enter ventilation systems. In the most extreme cases, vapors can build up in concentrations high enough to create fire and explosion hazards.

## Evaluating Vapor Intrusion

If it is determined that the potential exists for vapor intrusion, there are a number of methods available for investigating this condition. Soil borings and monitoring wells can be used to collect information on the nature and extent of volatile chemicals in soil and groundwater. If vapors are present, the data are evaluated to determine whether the presence of vapors presents a risk to buildings or structures. In some cases, a low mass of chemicals and limited pathways do not pose a significant risk. In addition, U.S. EPA and others have developed numerical models that are commonly used to evaluate risk.

## Preventing Vapor Intrusion

The most effective way to address vapor intrusion is to take steps to eliminate the problem before property development. In some cases, volatile contamination can be removed from the site before development, eliminating the source. In other cases, where vapors are at lower concentrations, or where a defined source does not exist, migration of vapors can be managed by installation of an impermeable barrier between the vapors and the building, such as a clay cap or the installation of plastic sheeting below the foundation. Another option includes venting soil gas before it can reach indoor areas.




Although removing the source is the preferred method, this is not always possible if the source is beneath a building or when the source cannot be completely removed. Ensuring that pathways into buildings such as foundation cracks, holes, gaps around pipes and utility lines, and sumps can minimize the potential for vapor intrusion problems. It is also possible to install ventilation systems to remove vapors once they enter a building.

There are a number of remediation systems that will effectively remove and control vapors and will eventually mitigate problems. These include soil borings or trenches with vacuum extraction systems that pull vapors from the subsurface. The collected gases can then be treated using aboveground treatment systems, including activated carbon canisters. There are many groundwater treatment technologies, including pump-and-treat systems, permeable reactive barriers, air sparging, vertical containment barriers, and *in situ* bioremediation. However, the exact technology, for soil or groundwater, must be designed based on site-specific conditions.

AEM has extensive experience in the investigation of soil vapor and volatile compounds, in soil and in groundwater, and in the design, installation, and maintenance of remediation systems. If you have any questions related to vapor intrusion, we will be more than happy to address your questions and assist with your problem.

## New OSHA Rule (Continued from Page 1)

This exemption does not cover special items such as prescription eyeglass inserts for full-facepiece respirators.

**Built-In Metatarsal Guards:** If an employer provides metatarsal guards but the employee requests to use shoes or boots with built-in protection, the employer is not required to pay for this type of footwear. An acceptable practice seems to be to offer employees the choice between using a provided metatarsal guard or a metatarsal shoe or boot with some portion of the cost paid by the employer.

**Uniforms and Sanitary Clothing:** The new rule does not require payment for uniforms, caps, or other clothing worn solely to identify a person as an employee and does not require payment for items worn to keep employees clean for purposes unrelated to safety or health, for items worn for product safety, consumer safety, or patient safety and health. However, other federal regulations or state laws may apply.

**Standard Clothing and Weather-Protective Clothing:** Employers are not required to pay for standard clothing such as long-sleeve shirts, pants, street shoes, and normal work boots if the employer requires employees to use these items and the clothing provides protection from a workplace hazard. Employers are also not required to pay for ordinary clothing used solely for protection from the weather, such as coats, gloves, rubber boots, hats, sunglasses, and sunscreen, unless special equipment or clothing is needed to protect the employee from unusually severe weather conditions, such as working in areas with high artificial heat or cold.

### Replacement Equipment

Employers are required to pay for all replacement PPE except when the employee has lost or intentionally damaged the PPE. The rule does not specify or address how often PPE is to be replaced, but replacement is already covered by each OSHA standard that requires PPE.

Employers can develop workplace rules and disciplinary measures to ensure that employees have and use employer-provided PPE as long as these measures do not violate the payment requirements and shift payment to employees.

### Employee-Owned PPE

Employees may use PPE that they own and the employer is not required to reimburse employees. However, an employer cannot require an employee to provide or pay for his or her own PPE, unless the PPE falls under one of the exceptions. OSHA recognizes that there are many industries

***The November 14, 2007, rule will be enforced beginning May 15, 2008***

where employees move from job to job and typically supply their own PPE. However, employees' use of their own PPE must be voluntary and the employee must be able to withdraw use at any time. An employer that allows employees to provide their own PPE is responsible for ensuring that the equipment is adequate, is maintained, and is sanitary under the applicable PPE standard.

If you have any questions regarding the requirements of this rule, please give us a call.

## Uniform Hazardous Waste Manifests

Beginning September 5, 2006, generators of hazardous waste are required by U.S. EPA, and authorized states, to use the Uniform Hazardous Waste Manifest (UHWM) form. This manifest form was developed by U.S. EPA to simplify and standardize the manifest process. The Final Rule published by U.S. EPA in 2005 allowed the use of previous waste manifest forms until the implementation date of September 5, 2006. Currently, all previous hazardous waste manifest versions are not accepted by U.S. EPA–licensed disposal facilities or federal and state hazardous waste regulators.

The UHWM was developed to standardize the process of waste manifesting and includes a number of substantial changes and overall improvements. These include the following:

- The UHWM is a standardized waste manifest form that was developed to be used nationwide, which reduces the burden on generators and transporters who operate in multiple states.
- The manifest form has standardized content and appearance.
- Manifest forms are available from several sources, including any U.S. EPA–approved printer.
- Generators are no longer required to provide a copy of the completed form to the state agency. If a state agency requires a copy, it must be provided by the disposal facility.
- Generators are provided additional time to address problems related to waste shipment or to file a discrepancy report.

The UHWM provides instructions regarding tracking of shipments that experience a problem, including rejected loads, waste residues from containers that were not completely empty, and wastes entering or leaving the U.S.

The UHWM rule, and the requirement to use specific forms, impact hazardous waste transporters, disposal facilities, and generators, each of which should carefully review the requirements of 40 CFR 262 Appendix I, related to manifesting hazardous waste, to ensure overall compliance.

If you have any specific questions regarding these requirements, please contact

***Use of new waste manifest forms was required beginning September 5, 2006, and the forms are available through a number of sources, including U.S. EPA.***

AEM and we will be glad to assist you with this.

WE HELP SOLVE ENVIRONMENTAL AND ENGINEERING PROBLEMS! PLEASE GIVE US THE OPPORTUNITY TO WORK WITH YOU.

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## ABOUT US ...

AEM is a small, woman-owned business founded in 1988 by Janet T. Hart, President. Ms. Hart continues to manage day-to-day operations that have led to our significant growth since inception and our continued success in the environmental market. Although company growth is an objective, it is our philosophy that growth is secondary to client service and quality. Put simply, the company's primary loyalty is to its clients, not to the growth of the company, unless growth provides for better client service. Building strong and lasting relationships with our clients is the most important thing that we can do to achieve our goals and ensure our future success.

AEM is committed to providing high-quality, cost-effective environmental services with a primary goal of client satisfaction. One quality that sets AEM apart from the competition is the personalized service and attention given to clients—the direct response to our clients' needs in a timely manner. We continuously work to improve the quality of our services to our clients.

AEM actively supports a number of charities including Doctor's Without Borders, the Humane Society of the United States, the Society for the Prevention of Cruelty to Animals, and the Synchronicity Performance Group, and we also support the Indianapolis Bantam Racers Hockey Team.

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