FDEP Rule Workshop Announcement and Arsenic Update

On February 26th, 2004, a combined rule development workshop will be held to consider rule changes to Chapters 62-713, 62-770, 62-777, 62-782, and 62-785, Florida Administrative Code (F.A.C.). In addition, the new draft cleanup criteria for all non-program sites, Chapter 62-780, F.A.C., will also be discussed. The workshop will be held at the Tallahassee offices of the Florida Department of Environmental Protection (FDEP), 2600 Blair Stone Road, in Room 609, from 9:30am until not later than 6:00pm.

Among the issues affected by the proposed rule changes are revisions to the soil cleanup target levels for arsenic based upon bioavailability, the potential for the chemical to be absorbed by the human body. While the September/October 2003 edition of the Times reported that the FDEP Contaminated Soils Forum had recommended a bioavailability adjustment factor of 4 (25%), FDEP now intends to recommend an adjustment to the direct exposure target levels based upon a bioavailability factor of 3. This adjustment would effectively revise the residential soil standard level to 2.2 mg/kg (up from 0.8 mg/kg) and the industrial/commercial standard to 13 mg/kg (up from 3.7mg/kg). However, we should all keep in mind that these numbers are not final, as additional FDEP workshops may occur before the formal Environmental Regulation Commission adoption hearing is scheduled.

The official Florida Administrative Weekly notice that announces this workshop, copies of draft workshop rules, web links to draft rules and guidance documents, and an agenda will be available on February 6th. Subsequent workshops may be scheduled prior to the adoption hearing by the Environmental Regulation Commission. Stay posted to the FDEP Contaminated Soils Forum website for additional workshop announcements and updates. Questions regarding this article can be directed to David Vanlandingham, P.E., at (954) 519-1478.

Important Links:
FDEP Contaminated Soils Forum: http://www.dep.state.fl.us/waste/categories/csf/default.htm

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The combined remediation technology of air sparge and soil vapor extraction is being implemented more frequently than ever in Broward County. As such, the comprehension of rules and regulations governing pollutant emissions to the atmosphere, and understanding of the key roles required to minimize emissions, is necessary.

Concentrations of pollutants recovered by a vacuum extraction system (VES) will not remain constant over time. Typically, a VES operating at petroleum, dry cleaning, or brownfields facilities recover relatively high pollutant concentrations immediately after start up. These concentrations diminish over time, in many cases dropping substantially after a short period of time.

Because of the relatively high concentrations observed immediately after start up, Sections 62-770.700(5)(a), Florida Administrative Code (FAC), 62-782.700(5)(a), FAC, and 62-785.700(5)(a), FAC (based upon whether the facility is in the petroleum, dry cleaning solvent, or brownfields program, respectively) mandate "air emissions treatment for at least the first 30 days" of system operation. Once the initial 30 days have passed, Sections 62-770.700(5)(e), FAC, 62-782.700(5)(e), FAC, and 62-785.700(5)(e), FAC allow the discontinuation of air emissions, or off-gas treatment, once it can be demonstrated that total air emissions "from all on site remediation equipment does not exceed 13.7 pounds per day."

The allowable discharge of 13.7 pounds per day is derived directly from Section 62-210.300(3)(b)2.b.(iii), FAC, which caps the discharge of total hazardous air pollutants (HAP) to the atmosphere at "2.5 ton per year." This annual limit was established for facilities acting as a steady pollutant source. Since pollutant concentrations typically spike immediately after start up before significantly dropping, the annual limit was viewed as too broad. In order to regulate the elevated concentrations immediately after start up, the allowable discharge from a VES was converted from the annual limit to a daily limit. Simply put,

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\left( \frac{2.5\text{tons}}{\text{yr}} \right) \times \left( \frac{2000\text{lbs}}{\text{ton}} \right) \times \left( \frac{1\text{yr}}{365\text{days}} \right) = 13.7 \text{ lbs/day}
\]

Sections 62-770.700(10)(i)2, FAC, 62-782.700(12)(i)2, FAC, and 62-785.700(12)(i)2, FAC, dictate influent and effluent vapor samples be collected for laboratory analysis (for chemicals of concern which are, of course, dependent upon the type of contamination at the site). The total mass of pollutants emitted to the atmosphere on a daily basis can be calculated utilizing the laboratory analysis of these samples and VES flow rate via the following equation:

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M = \left( C \frac{\text{mg}}{\text{m}^3} \right) \times \left( Q \frac{\text{ft}^3}{\text{min}} \right) \times \left( \frac{0.0283\text{m}^3}{\text{ft}^3} \right) \times \left( \frac{\text{g}}{1000\text{mg}} \right) \times \left( \frac{0.002205\text{lbs}}{\text{g}} \right) \times \left( \frac{1440\text{ min}}{\text{day}} \right)
\]

where \( M \) = Pollutant mass, in pounds/day,
\( C \) = concentration, in mg/m3, and
\( Q \) = flow rate, in CFM

See VES Emissions, Continued on Page 4
Obtaining an FDOT Maintenance of Traffic Permit

The process of obtaining the maintenance of traffic (MOT) permit from the Florida Department of Transportation (FDOT) for projects within Broward County is usually a straightforward procedure. To initiate the process, one should contact Mr. Al Rich, Permits Manager at FDOT District 4 Maintenance Yard by telephone at (954) 776-4300 and be prepared to submit by fax, letter, or hand delivery a copy of the appropriate page from Index 600 of the Traffic Control through Work Zones as supplied in the FDOT publication Design Standards 2002 (see item 4 below). The index chosen can be red-lined as appropriate. The mailing address for the FDOT District 4 Maintenance Yard is 5548 Powerline Road, Fort Lauderdale, FL 33309. Mr. Rich should be contacted prior to submission to discuss site-specific issues and any particular requirements that may be needed in the event that the work site is located in an area having special requirements. In the event that no special requirements are necessary, this procedure will likely be acceptable to obtain the permit, and the applicant will receive approval either verbally by telephone or written approval by facsimile as agreed upon with Mr. Rich.

In the event that the work location is in a sensitive area because of traffic volume, other construction, safety issues, etc., it may be necessary to submit a more formal application package for submission. This would be determined during the initial telephone call with Mr. Rich. If needed, the formal application package would include the following:

1) An outline of the work to be performed.
2) A scaled site map.
3) The work timetable to include date(s) that the work will be performed and the hours during the day in which the MOT will be maintained.
4) The MOT plan showing the positioning of cones, barricades, sign boards, and/or flagman as required. Examples of recommended plans can be found within the reference, "Design Standards 2002" in the Index 600 series which can be purchased at http://www.caistore.com/mapspubs/publications_list.asp.
5) Provide a copy of the certificate of insurance for the firm performing the work to make sure FDOT is protected from any liability arising from the work performed.
6) Provide a letter of agency, addressed from the responsible party to the firm performing the work, indicating that the firm may pull permits and perform the work scope outlined in point 1 above on behalf of the responsible party.

If the latter permit package is required, Mr. David Maloney, District Environmental Coordinator, should be copied on the correspondence sent to Mr. Rich, and kept apprized of the environmental conditions observed during site activities. Mr. Maloney can be reached at (561) 432-4966, ext. 1133 or David.Maloney@dot.state.fl.us. Mr. Maloney's mailing address is: FDOT, 3400 West Commercial Boulevard, Fort Lauderdale, FL 33309-3421. Please note that Mr. Maloney should also be copied on all reports regarding environmental work resulting from FDOT roadway incidents.

Note: This article is the second of a three-part series on Maintenance of Traffic. For the first article, please see “An Introduction to Maintenance of Traffic” in the November/December 2003 Edition of the Times. Contacts and information for MOTs submitted to Broward County (for Broward County-owned right of way) will be featured in the third, upcoming article and can be found at http://www.co.broward.fl.us/traffic/tei01004.htm.

Any questions or comments? Contact Mr. John Gomolka, P.G., at (954) 519-1279 or jgomolka@broward.org.
VES Emissions, Continued (from Page 2)

Based on the emissions treatment technology utilized and the magnitude of contaminant mass, pollutants will, on occasion, be discharged to the atmosphere at a rate that exceeds the 13.7 pounds per day limit. Because of the immediacy required to minimize the reintroduction of contaminants to the atmosphere, emissions rates should be calculated by the environmental consultant as soon as laboratory results are available. Once it is determined these standards are being exceeded, the remediation system should be immediately shut down and the corresponding Local Program or Florida Department of Environmental Protection (FDEP) project management staff notified. At that point, a determination can be made whether it is necessary to upgrade the system to meet these standards (or if off-gas carbon canisters have reached breakthrough and simply need to be replaced). It is imperative to understand that reporting emissions exceedances in a quarterly or annual Operations and Maintenance Report is not the appropriate time to identify emissions violations and propose remediation system modifications.

Maintaining emissions standards established by the FDEP is the most fundamental aspect of VES operation. The prudent evaluation of emissions rates, and open dialogue between the consultant and corresponding Local Program or FDEP site manager, will result in the cleanup of a pollutant source with little to no impact on those who either work on a regular basis, or reside near, the remediation system.

Questions regarding this article may be directed to David Singleton, P.G., at (954) 519-1429 or dsingleton@broward.org. You may also refer to FDEP’s guidance document on remediation air emissions treatment and monitoring, located at http://www.dep.state.fl.us/waste/quick_topics/publications/pss/pcp/geninfo/active/bpss04.pdf.