Broward County Responds to Discovery of Buried Drums in Pompano Beach

On April 18, 2001, Broward County’s Department of Planning and Environmental Protection (DPEP) was notified by the Florida Department of Environmental Protection that buried drums had been discovered at American Pavers Manufacturing, Inc. (American Pavers), located at the northeast corner of Dixie Highway and 48th St. in Pompano Beach. Broward County Fire Rescue and DPEP’s Environmental Response team immediately mobilized to the site to conduct an investigation and coordinate assessment and health and safety procedures.

The warehouse facility had previously been owned and operated by Plastiline, which was a polyvinyl chloride (PVC) molding company that operated from 1960 until the mid-1980s. Raw PVC was shipped to the facility and was stored in silos until it was molded and extruded into PVC pipe and pipe fittings. American Pavers purchased the property in 1998 and is in the process of renovating the facility to accommodate their paver manufacturing processes. The extensive renovations involved the excavation of large areas of the existing concrete flooring inside the warehouse building. During this excavation, the buried drums were discovered inside a subsurface concrete trench. Soils in the trench were wet, indicating that the drums may have leaked.

American Pavers retained a licensed waste management company (Atlantic Industrial Services, Inc.) to evaluate the situation and to properly dispose of the drums. Eventually, a total of 28 drums were found. With DPEP staff present, samples from the drum contents were collected and analyzed. Analytical results indicated that only one of the drums contained a hazardous waste, isopropylbenzene. The isopropylbenzene met the definition of hazardous waste under the Resource Conservation and Recovery Act due to its flammability. Remaining drums contained industrial solvents and other substances with non-hazardous concentrations of chemicals including toluene, xylenes, and phthalates.

Once characterized, the drums, the substances they contained, and contaminated soils inside the trench were properly disposed. Upon visual inspection, the trench appeared to have no breaches in the concrete walls or floors that would have allowed chemicals to leak into the ground. Samples taken from soils and groundwater confirm that no contamination had seeped through the concrete trench.

See Buried Drums, continued on page 3
In-house drilling can only be used if rates are locally competitive and full-service capabilities can be offered. Drilling is not to be routinely split into surficial and deep events.

FDEP would like to have the soil borings advanced 1 to 2 feet into the water table, preferably 1 to 2 feet below the seasonal low water table. This is to allow data to be collected to determine smear zone characteristics.

Recent drastic water table changes may make it beneficial to use 15 feet of well screen rather that 10 feet. Please discuss potentially affected sites with the FDEP or Local Program project manager on a case-by-case basis.

Micro-wells are acceptable but be careful of recharge issues in fine-grained sediments. FDEP has reported that the ground water table depth was not accurately determined in many assessments.

The Chapter 62-770 soil confirmatory sampling of a high, medium, and low vadose zone soil sample (based on OVA) is a minimum requirement. If a large number of soil borings are planned, use a general rule of thumb of one soil lab sample per 20 OVA samples (5%).

The general guidance for initiation of site assessments is to sample individual source areas, once each for the full 62-770 Table B parameters. In general, nonsource wells should be analyzed for BTEX (including MTBE) and PAHs. Subsequent analytical parameters can be adjusted based on initial results.

FDEP Memorandum “Investigations Near Petroleum Storage Systems” (dated 9/25/00)

The Bureau of Petroleum Systems (BPSS) has noted several proposals that mention a need to avoid drilling in the critical zone near the tank and supply systems at several sites. The BPSS wanted to reiterate that assessment within three feet of potential source areas, when necessary to identify source area characteristics, is to be performed as part of the assessment. The BPSS considers assessment within the critical zone a part of the preapproval work effort. Similarly, for sites which receive no State funding assistance, assessments will not be approved if the source area is not adequately addressed.

Assessment within the critical zone is, understandably, to be carried out with caution. Hand removal techniques are to be used for the first 4 feet of soil boring/monitor well advancement. As-built drawings should be used but with caution as they are not always accurate. The contractor should document the steps taken to safeguard the critical zone as the BPSS will take responsibility for repair and cleanup costs if it is demonstrated that “proper due diligence had been followed in the field, and that they have an established hand extraction protocol and emergency abatement plan that is to be followed by their personnel.” In the event of an incident, the BPSS must be notified immediately.

Need additional information or have questions? Contact John Gomolka, P.G., at (954) 519-1279 or via email at jgomolka@broward.org.
Buried Drums, continued

The DPEP is conducting further environmental assessment work to ensure the protection of local citizens, the adjacent drinking water supply, and the county’s natural resources from risks associated with any improperly disposed materials at this location. An assessment plan has been developed and is currently being implemented to determine if any other improperly disposed materials remain on the site. This plan includes an aerial photograph review by DPEP staff to determine if previous land use indicates potential environmental impacts to the site and surrounding area.

Non-intrusive geophysical testing (ground-penetrating radar and a magnetometer survey) will then be used to investigate suspected areas. This type of geophysical testing employs instruments which will measure and record electric and magnetic properties of subsurface soils. The results will be interpreted to determine if buried drums or other potentially harmful situations may be present. This type of assessment is non-intrusive, giving vital information regarding which areas require further investigation and/or excavation. Having geophysical data also prevents the accidental puncturing of any buried drums during subsequent assessment activities, which may exacerbate the problem.

Of particular concern is a Broward County municipal drinking water supply well, located 200 feet to the north of the American Pavers facility. As a precautionary measure, Broward County’s Office of Environmental Services (OES) has shut down the well pending further investigations. Frequent monitoring indicates that the water supply well is not contaminated and meets applicable primary and secondary drinking water standards. DPEP’s Environmental Response team is also sampling irrigation water used at local residences to respond to public concerns. Meanwhile, the Broward Sheriff’s Office has launched a criminal investigation to determine who is responsible for the improper disposal of the materials.

Licensing of Waste Transporters

The Broward County Department of Planning and Environmental Protection (DPEP) regulates the transportation of discarded hazardous materials under the authority of Chapter 27, Article XVII of Broward County Code (Sections 27-434 through 27-439). The Department’s Solid Waste Section is responsible for regulating the companies which transport discarded hazardous material, such as contaminated soil from clean-up sites, through licensing, inspections and reporting requirements. These wastes, when improperly disposed, can create a potential risk to people and the environment.

It should be noted that the definition of “discarded hazardous material” includes used oil, petroleum-contaminated media, and other contaminated soils. A company engaging in the activity of transporting contaminated media which is generated or transported to, from, and within Broward County requires a waste transporter license from the DPEP. A placard is issued for each vehicle used to transport these materials. For more information call Mr. Didier Dupuy at (954) 519-1245, or E-mail ddupuy@broward.org.

Related Links:
The Broward County Waste Transporters Ordinance: [www.broward.org/dni00114.pdf](http://www.broward.org/dni00114.pdf)
A list of Waste Transporters which are currently licensed by the DPEP: [www.broward.org/ppi03300.htm](http://www.broward.org/ppi03300.htm)
**Frequently Asked Questions**

Q. I think that my contaminated site may qualify for No Further Action with Conditions (NFAC). How do I find out more about NFAC requirements and administrative processes?

A. See the January/February 2000 edition of the *Times* at [http://www.broward.org/ppi01500.htm](http://www.broward.org/ppi01500.htm) for an article entitled *When is No Further Action with Conditions an Option for My Site?* The Florida Department of Environmental Protection has also provided a document entitled *Institutional Controls Procedures Guidance* on the Contaminated Soils Forum website at [http://www.dep.state.fl.us/dwm/programs/csf/default.htm](http://www.dep.state.fl.us/dwm/programs/csf/default.htm). The *Guidance* details the types of institutional and engineered controls which may be used to achieve site closure through a NFAC determination.

Q. How do I find out if a property is a contaminated site in Broward County?

A. Broward County has made available a complete list of all known contaminated sites in its *Semiannual Inventory Report on Contaminated Locations* at [http://www.broward.org/ppi01500.htm](http://www.broward.org/ppi01500.htm). You can also search the contaminated sites database by several parameters (including address) at [http://www.broward.org/database/nrloc.htm](http://www.broward.org/database/nrloc.htm).

*Have any questions you’d like to see answered here? Contact David Vanlandingham, P.E., at (954) 519-1478 or dvanlandingham@broward.org.*

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**Feedback Forum**

In order to improve the services which the EAR Section provides and better understand your needs, we need your feedback! Do you have a suggestion for the *Times*? Are there areas in which the Section can serve you better? There are several ways which you can provide us with your constructive criticism:

- We have provided a questionnaire for you on the last page of this *Times* edition. You may print it, fill it out, and return it via fax to Lorenzo Fernandez, P.E., at (954) 765-4804.

- You may print the questionnaire, fill it out, and send it via U.S. mail to:
  
  **Department of Planning and Environmental Protection**
  
  **ATTN: Lorenzo Fernandez, P.E.**
  
  **218 S.W. 1st Avenue**
  
  **Fort Lauderdale, FL 33301**
  
- If you elect not to use the form, you may contact Mr. Fernandez via email at lfernandez@broward.org or via telephone at (954) 519-1249.
Date: __________________________

SECTION ONE: How can we contact you? (Optional)

Name ___________________________ Title: ___________________________

Company/Agency: ___________________________

Address: ___________________________

City/State/Zip: ___________________________

Email Address: ___________________________ Telephone: ___________________________

SECTION TWO: The Environmental Assessment and Remediation (EAR) Program

What areas of environmental clean-up regulation, policy, and procedure require further explanation or guidance?

What do you feel are the strongest elements of the EAR Program?

What areas of the EAR Program need improvement?

Would you characterize your interaction with EAR Section personnel as positive, negative, or indifferent? Please explain.

In your experience with other regulatory agencies, what programs were successfully implemented to improve the environmental remediation process?

SECTION THREE: The Broward Environmental Remediation Times

What types of additional information in the Times would be of benefit to you?

Would you recommend the Times to others? Please provide the names and email addresses for those individuals you feel would wish to receive the Times.