

Florida Department of
Environmental Protection

Memorandum

TO: District Waste Program Administrators
District Solid Waste Engineers

FROM: Richard B. Tedder, Program Administrator
Solid Waste Section

Chris McGuire, Senior Assistant General Counsel
Office of General Counsel

DATE: May 28, 2009

SUBJECT: Interim Drywall Disposal Guidance
SWM-19.17



A number of problems have been reported involving homes that were constructed over the past several years with drywall imported from China. While the exact number of homes affected in Florida is unknown, it is estimated that as many as 35,000 or more houses were constructed with Chinese drywall. This drywall appears to be emitting gasses, including hydrogen sulfide, sulfur dioxide and carbon disulfide, that may be related to numerous health complaints being investigated by the Florida Department of Health. There is also evidence that the drywall, probably through emission of some of these gases, is causing corrosion of copper wires and air conditioner coils in these houses. Data from testing this drywall indicates it is not a characteristic hazardous waste. However, it seems to release hydrogen sulfide gas at a faster rate than domestic drywall. It also appears to have elevated levels of strontium relative to domestic drywall.

In the aftermath of the clean-up from the 2004 and 2005 hurricanes, several construction and demolition (C&D) debris disposal facilities in the northwest region of the state experienced severe hydrogen sulfide¹ odors. In some cases, the concentrations of hydrogen sulfide were a potential health concern to residents living near these facilities. This was probably a result of accepting large volumes of damaged drywall along with vegetative debris. While hydrogen sulfide odors have been reported sporadically at C&D disposal facilities statewide, there have not been major issues with odors at most facilities that accept small amounts of drywall in the normal course of business.

Because of the current odor problems and potential health concerns from hydrogen sulfide gas, along with the possibility that many tons of Chinese drywall will enter the waste stream in the near future, questions have been raised about the proper

¹ It is well known that calcium sulfate from drywall, when exposed in a disposal facility to anaerobic conditions, moisture and organic matter, is consumed by sulfate reducing bacteria to produce hydrogen sulfide gas.

management of both imported and domestic drywall in Florida. This memorandum is intended to give guidance on the disposal of this material.

Rule 62-701.200(27), Florida Administrative Code defines C&D debris to include gypsum wallboard² "from the construction or destruction of a structure as part of a construction or demolition project or from the renovation of a structure..." Since drywall is included in the definition of C&D debris and since the Department has no reason to believe this material is a hazardous waste, its disposal at permitted C&D debris disposal facilities in the state is not a violation of the Department's rules. However, C&D debris disposal facilities typically do not have gas collection and control systems, and are not normally designed to handle excessive levels of hydrogen sulfide gas that could result from the disposal of large amounts of drywall. On the other hand, Class I landfills often do have gas control systems. Class I landfills also typically accept much more waste than do C&D disposal facilities, meaning that dedicated loads of drywall would not have as much of a potential impact on odors emanating from the facility. And Class I landfills are required to apply initial cover on a daily basis. For these reasons, the Department recommends that C&D disposal facilities, as well as Class III landfills, develop management plans to segregate or refuse to accept dedicated loads³ of drywall, and instead to direct such dedicated loads to Class I landfills. If a C&D disposal facility or a Class III landfill elects to continue to accept dedicated loads of drywall, the Department recommends that the operator apply at least six inches initial cover soil over the drywall, preferably that day but at least weekly.

This memorandum applies to both imported and domestic drywall. C&D disposal facilities that continue to accept dedicated loads of drywall without applying initial cover will not be subject to enforcement actions solely on this basis, but may face increased inspections and testing to make sure that gas emissions do not become a problem.

Caveat

This guidance memorandum does not constitute a rule of the Department. It is intended solely as internal guidance to District staff, and is not intended to create additional requirements for the regulated community or to affect the rights of substantially affected parties to any agency decision. Please do not cite any part of this memorandum as though it were a standard, rule, or requirement.

² For the purposes of this memorandum, gypsum wallboard is considered to be drywall. Pure gypsum is calcium sulfate dihydrate, $\text{CaSO}_4 \bullet 2\text{H}_2\text{O}$.

³ For the purposes of this memorandum, dedicated loads are defined as loads of predominantly or exclusively drywall generated by the construction, demolition or renovation of a structure.