



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

APR 6 2009

OFFICE OF  
SOLID WASTE AND  
EMERGENCY RESPONSE

Mr. William O. Bresnick, Esq.  
Energy and Environment Twenty-One, Inc.  
2600 Virginia Ave., N.W., Suite 505  
Washington, D.C., 20037

Dear Mr. Bresnick:

Thank you for your correspondence of May 8 and December 9, 2008, regarding the regulatory status of the Wyvern process for the recovery of metals from small and large caliber unused munitions under the military munitions rule (40 CFR 266.202.) We agree with your assessment, as described in your correspondence, that the recovery of metals and energetics from large caliber unused munitions does not involve destruction of recyclable materials and, therefore, does not constitute discard. Thus, it presents no regulatory issues under RCRA, and the large caliber unused munitions processed in the Wyvern process are not solid wastes. Section 40 CFR 266.202(a)(2) notes that unused munitions that are "subject to materials recovery" and not involved in activities that could be termed "use constituting disposal" or "use for energy recovery" are not solid wastes.

In addition, based on the description of the process in your letters, we also agree that the Wyvern process for small caliber munitions does not involve discard of the materials and, similarly, 40 CFR 266.202(a) is applicable to that process. EPA's view is that the heat applied to separate the metal (e.g., steel or brass) shell casing from the lead bullet to facilitate recovery of the two different metals constitutes recycling, disassembly, reclamation or other materials recovery process.

Our view of the process is as follows. Heat is added in the furnace to cause the shell casing to expand. The controlled addition of heat also causes the nitrocellulose energetic to volatilize (rather than burn/oxidize) into a hydrocarbon gas providing the pressure to separate the metals that make up the munitions. The bullet falls off the expanded casing allowing for separate recovery of the lead bullet from the steel or brass shell casing. The hydrocarbon gas then escapes the casing and is vented to the atmosphere with any necessary air emission controls. The heat from this chemical reaction is quickly swept from the furnace with a high rate of air exchange to assure that the temperature remains in a very close range and does not rise to the point where the munitions begin to ignite while the bullets are still in place on the shell casing. Controlling the temperature in the furnace to insure energetic is volatilized rather than burned is

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very important to the ability to recover the metals. The energetic is used to promote separation of the bullet and casing and, thus, is useful in the metals recovery process. It is our judgment that the destruction of the energetic should be viewed as incidental to the process that recovers substantial metal for recycling into other products. EPA does not consider this destruction an activity that would render the process waste treatment and, therefore, subject to RCRA.

Given that you plainly have a metals recovery process and that destruction of energetic appears useful to the process, it is not necessary to consider whether the process involves burning for energy recovery as noted in 40 CFR 266.202(a)(2). However, it does not appear that your process involves either burning or energy recovery.

As you are aware, EPA generally authorizes States to implement their hazardous waste programs in lieu of RCRA. Thus, states make the permitting decisions about individual facilities located in those States. States also can be more stringent than the EPA rules and interpretations. It is important that you contact the State permitting authority where you intend to locate your process and assure how the process will be regulated under the specific State rules that will apply.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Hale', with a long horizontal flourish extending to the right.

Matt Hale, Director  
Office of Solid Waste