

Proposed Regulations for the Handling & Storage of Bulk Material Piles

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Sent: Saturday, December 21, 2013 10:33 PM

To: PetCokeComments

Attachments: ChiDPH cmnts USPS 122113.docx (105 KB)

Attached are my comments about the Notice of Proposed Regulations - For the Handling and Storage of Bulk Material Piles - given on 12/19/2013. The buzzword of course is "petcoke." It seemed easier to maintain my original printable format with a Word document attached. Thank you for accepting public comments about this.

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December 21, 2013

Department of Public Health
Attn.: Environmental Permitting and Inspections
333 S. State St., Rm. 200
Chicago IL 60604

Comments Re: "Notice of Proposed Regulations – For the Handling and Storage of Bulk Material Piles"
[12/19/2013]

I am in favor of the proposed regulations prohibiting "fugitive dust", and requiring all Bulk Solid Materials to be in fully enclosed structures, "except as provided in paragraph (5) below."

But, I am concerned about the "applicable building code requirements" for "structures used to store Bulk Solid Materials." I don't know if they're strong enough. The goal is complete containment of the contents, not protection of people. FEMA P-320 puts the entire State of Illinois in the "high risk zone for extreme winds." These include derechos and microbursts as well as tornadoes. It says that a "safe room is the preferred method of protection from extreme winds." For complete containment of the contents in extreme winds, we might want the entire structure to be built as a "safe room."

Reinforced concrete, in the *ceiling* as well as the walls, is needed to withstand an EF3 tornado. Unreinforced concrete masonry units, and unreinforced "cinder block" walls, common in both light industrial and large commercial buildings, will *not* do that.

I can suggest two kinds of reinforced concrete construction which would be good for these buildings.

1. Dukane Double-Wall Precast

Dukane double-wall precast is a sandwich of reinforced concrete, held together by steel trusses, with insulating foam in between. This is made in Naperville, Illinois.

2. Monolithic Dome

"Monolithic Domes are constructed following a method that requires a tough, inflatable Airform, steel-reinforced concrete and a polyurethane foam insulation. Each of these ingredients is used in a technologically specific way."

<http://www.monolithic.com/topics/domes>



"Bruco" is a caterpillar-shaped building made of 7 interconnected domes, inside of which Airforms are made at the company's headquarters in Italy, Texas. Bruco might be a model for buildings to enclose our Bulk Solid Materials, safely. The company also makes tarps adapted from their Airform material.

Unless the petcoke in Chicago from the Alberta tar sands can be burned as fuel in U.S. electrical power plants subject to the highest emission regulations, it would be better to have it decomposed, with the elements sent to various practical uses. I think the best way to solve this Challenge is for the companies responsible for our petcoke to have InnoCentive.com crowd-source it, with a generous prize. The companies would have to give Solvers samples of this petcoke, with a list of all chemical compounds in it. My suggestion was already reported recently on WTTW's "Chicago Tonight":

wttw.com/comments

by: JeanSC

"I urge that this stuff be considered as 'ore' and ways devised to extract every useful element from it. I suggest that KCBX Chicago and Beemsterboer team up with InnoCentive.com to crowd-source this challenge to find solutions. Offer a generous prize. I think it's worth the investment."

<http://chicagotonight.wttw.com/2013/10/21/viewer-feedback-1021>

Sincerely,

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