

From: [Chris Allen](#)
To: [Roland Bartl](#); [Planning Department](#)
Subject: Fwd: Fuel Storage For Backup Systems
Date: Wednesday, March 12, 2014 4:43:02 PM

Roland,

Some feedback from those that drafted the amendment proposal.

More to come, I am sure!

Sent from my Verizon Wireless 4G LTE Smartphone

----- Original message -----

From: "Malchodi.ctr, Paul"
Date: 03/12/2014 4:15 PM (GMT-05:00)
To: Barry Rosen ,Chris Allen
Cc: Matt Mostoller , "Mary E. Bassett" , "Dr. Ronald Parenti" , "Dr. Ronald Parenti" , Len Phillips , Stephen Stuntz , Charles Olmstead , John Cipar , Paul Malchodi
Subject: RE: Fuel Storage For Backup Systems

All true, though when one (of 4) major natural gas pipeline across the Hudson River fails during a cold snap one January day, we will all develop a much sharper understanding of the meaning of the expression: "single point of failure"

That said- I think that diesel fuel storage for backup power systems should have significant ground water protection elements built into any special permit granted for such storage. Understanding that generally, diesel is not highly mobile in ground water, and that it tends to bind fairly tightly with soils and so is less of an issue as the storage becomes more distant from the well. So such permitting should take into consideration the local conditions of the site, and whether it is sitting on a very active drinking water aquifer only yards from a well, or is well upland and miles from a well. Both those conditions exist in our zone 3 areas.

Paul Malchodi
781-895-8432 (o), 978-406-7264 (m)

From: Barry Rosen [mailto:barryrosen@gmail.com]
Sent: Wednesday, March 12, 2014 4:00 PM
To: 'Chris Allen'
Cc: Mostoller, Matt; Mary E. Bassett; Dr. Ronald Parenti; Dr. Ronald Parenti; Len Phillips; Stephen Stuntz; Malchodi.ctr, Paul; Barry R. Rosen; Charles Olmstead; John Cipar; Paul Malchodi
Subject: Fuel Storage For Backup Systems

From what I've learned, diesel is becoming a much less preferred fuel for power back-up systems because of the new EPA requirements that diesel being used in a power backup system must be ULSD (ultra-low sulfur diesel). There are also new emissions standards for those systems that began phasing-in during 2011. The required fuel is expensive and unstable. It oxidizes easily (begins within a year), microorganisms can grow in it and their waste is acidic which is corrosive to fuel lines, engines and storage tanks. However diesel is in widespread use because it has been used for these systems a long time and is perceived to be reliable. With today's newer technologies, there are a number of

alternatives available (e.g. natural gas, LP vapor, LP liquid, fuel cells) which most consulting engineers will now consider. Gasoline is rarely used in commercial applications because it is very volatile compared to the other choices and has a relatively low thermal density (which would make it more expensive to operate a large system on gasoline).

I believe that most residential power backup systems will not store a great deal of fuel. The people that I know that have such systems are utilizing relatively small gasoline powered generators to provide some power while the people I know that have whole house systems are using natural gas. Large fuel storage for power backup is more likely to affect businesses. The ones that already have such systems installed are grandfathered – no problem. A business (or a residence for that matter) that wants to install power backup with on-site fuel storage can be considered on an individual basis. However, because alternatives to diesel are now available, the much safer and environmentally friendly alternatives should be encouraged. The changes in the section 4.3 bylaw will provide this encouragement.

From: Chris Allen [<mailto:Chris@actonwater.com>]
Sent: Wednesday, March 12, 2014 1:49 PM
To: Parenti, Ronald - 0666 - MITLL
Cc: stuntzsc@acornlab.com; Len Phillips; Barry Rosen (barryrosen@gmail.com); John Cipar (john.cipar@gmail.com); Olmstead, Charles; Paul Malchodi; Mary@MaryBassettLaw.com; Matt Mostoller
Subject: RE: Questions from Town Planner re: Draft of GWPD amendment

One other item, he expressly called out fuel storage for backup power systems. Obviously, in most cases, this storage exceeds 90-gallons.

Chris Allen
District Manager

Water Supply District of Acton

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“When the well’s dry, we know the worth of water”—Benjamin Franklin 1776

From: Parenti, Ronald - 0666 - MITLL [<mailto:parenti@ll.mit.edu>]
Sent: Wednesday, March 12, 2014 1:36 PM
To: Chris Allen
Cc: stuntzsc@acornlab.com; Len Phillips; Barry Rosen (barryrosen@gmail.com); John Cipar (john.cipar@gmail.com); Olmstead, Charles; Paul Malchodi; Mary@MaryBassettLaw.com; Matt Mostoller
Subject: Re: Questions from Town Planner re: Draft of GWPD amendment

All,

The densities of gasoline and diesel are 6.1 and 6.9 lb/gal, respectively. Therefore, the 90 gal

limit would translate into roughly 600 lb of fuel.

Ron

On Mar 12, 2014, at 12:49 PM, Chris Allen <Chris@actonwater.com> wrote:

All,

I spoke with Roland Bartl just now, and he needed some clarification, had some questions and requested some revision to the proposal.

1. He suggested to combine the two articles in one, Part A & B, to consolidate presentation, explanation, and Q&A all to one article.
2. He questioned the aggregate volume of 90-gallons, what is based on? Asked if this is inclusive of all storage of material or, of each individual chemical would be limited to 90-gallons? And, since Zone III covers a very large area, addressed the potential of retail stores, i.e., Stop-n-Shop, exceeding this pretty rapidly with what is on the shelves. He presented this as more a question for the Planning Board, but I thought we might be able to give him some feedback.
3. He stated that the Town's HazMat bylaw addresses lbs of material as well as gallons. He wondered if our intent would be better covered by the same inclusion? For example, HTH (Calcium Hypochlorite) is usually in granular/powder form, and thusly, would be quantified in lbs. He also stated that the HazMat bylaw starts at quantities as small as 25-gallons.

As time is short, he requested expeditious feedback on these requests and questions, this afternoon, if possible.

He also stated that the Planning Board, at their meeting last night, decided to continue their decision on this due to the lack of a public hearing, currently scheduled for April 1st.

Please give me your thoughts/impressions.

Thank you
Chris

Chris Allen
District Manager

Water Supply District of Acton

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