

## **OEE Updates to HUD's ASD Requirements for Propane Tanks Webinar Transcript 2020-02-21**

Marcell Choi: The rule was published on January 24 and will become effective next Monday, Monday February the 24th. So we thought that rather than just presenting you with a rule to decipher and figure out on your own, it would be good that for us to give you another view and give you the opportunity to ask question and give us your feedback.

The webinar today is being hosted by Enterprise Community Partners and without further delay, I would pass the ball to Michelle Grainger from Enterprise. Thank you very much. Michelle, you can take the ball and run.

Michelle Grainger: Thank you, Marcell [ph]. Thank you everyone for joining us today for today's webinar. All attendees will be muted. Please feel free to use the Q&A panel on the bottom of your screen to ask questions. For best audio quality, please listen to the webinar via your phone by using the dial-in number provided. And now I'll pass the ball onto Zack Carter.

Zack Carter: Okay. Thanks, Michelle. So just to give an outline what the presentation today is going to cover, we're going to do a little bit of background of the current version of 24 CFR 51, and what it applies to now and then talk about the rule on propane tanks. And then we're going to move into how that is applied to HUD activities sort of going forward.

And we'll have time for questions periodically. Because of the number of attendees, we're going to be addressing questions through the question and answer panel in the zoom interface that we're using today. So we have part of the presentation team that's going to be answering the Q&A while we're going through the slides. And periodically we'll check in and repeat some of the more frequently asked questions for everyone who's watching the webinar. So if you do have a question, please use the question and answer panel in the zoom and we'll make sure to be able to get to your question that way.

So just as background, the HUD regulation in 24 CFR 51 C, unacceptable separation distance, establishes safety standards for HUD-assisted activities that are in proximity to above-ground storage tanks that handle flammable liquids or flammable or explosive gases. And the safety standards in the HUD rule are based on thermal radiation and blast overpressure criteria from research that was conducted over a period of time, and established the thermal radiation standard for buildings of 10,000 BTU per square foot per hour for people of 450 BTUs per square foot per hour and then built blast overpressure for buildings of .5 psi.

And those criteria are intended to allow for building's emergency responders if they're, for example, before the building catches on fire from nearby heat source and then for people to be able to get out of the area before injury. So that's sort of what the HUD's acceptable separation distance criteria are based on as they are in the regulation now.

So the regulation at 24 CFR 51 C in order to be covered by this regulation, there are a couple different criteria to have to be met and the first one is it has to be a HUD-assisted project, which

is a term that's defined in the regulation itself and it has a specific meaning for the regulation and that's anything that has development, construction, rehabilitation, etcetera, with HUD assistance or mortgage insurance where it's going to be for residential or other human occupied uses and primary where it's going to actually increase the number of people that are exposed to hazard.

So most activities involving new construction that are going to be occupied by people would meet that HUD-assisted project definition but other activities like rehabilitation, being the most common one, if they don't increase the number of people exposed to the hazard are not covered; they're excluded from coverage by the regulation and via this definition of HUD-assisted project.

Okay. So we have the first knowledge check for the webinar. The question is, "Is rehabilitation of an occupied single-family home that does not increase the number of people exposed to a hazard covered by the regulation at 24 CFR 51 C?" So I'll pause for a few seconds just to consider an answer to that and then we'll start back.

Okay. So this is pretty straightforward. So we'll go ahead. So the answer on this is if the rehabilitation does not increase the number of people exposed to the hazard, then it's not a HUD-assisted project for purposes of the definition in this reg and so it's not covered by the regulation.

So in addition to the definition of the HUD-assisted project, you have to have a container in proximity that is considered a hazard and that's also a part of the definition section of the regulation. And a hazard is a stationary container that stores, handles or processes explosive or flammable substances. And so what you're looking at here is the current definition of the reg and this definition is what the rule that we're talking about today modifies.

So as it exists now, it covers basically above-ground storage tanks that have these listed liquids or gases that are considered hazards and it specifically does not apply to pipelines underground. It does not apply -- hazard does not include containers of 100 gallons or less capacity when they contain common liquid industrial fuels like gasoline. And it does not cover facilities that are shielded by topography from the HUD-assisted -- where there's topography between the HUD-assisted project and the hazard. And that is traditionally how we've interpreted the fact that this regulation doesn't apply to underground storage tanks, but as you'll see this rule makes that more clear in the definition.

So here's some pictures of hazardous operations, some examples. You have a bulk fuel and storage facility. You have a petrochemical plant and then you have a propane gas storage and distribution point. So as you can see, under the regulation currently, propane gas is something that's covered, is a type of container that's covered under the regulation.

Okay. So current exceptions, again, the regulation does not apply to high pressure gas transmission pipelines or liquid petroleum pipelines. Natural gas holders with floating tops and usually that's something that's -- it's a very specific type of tank design that has to be confirmed. So normally if there's a natural gas holder with folding top that's something that you would confirm that if that is in fact the type of container that is there. And if that's the case it's not covered by the regulation.

Mobile tanks in route, so like on a railcar, on a truck, those are not covered by the regulation. Underground storage tanks, as we mentioned, they're shielded by topography and then containers of 100 gallons or less.

So just some pictures of these examples again. I won't read back through all of them but just to note the Number 4 where you have the double wall tank with an interstitial space for ASD calculations. So basically, that's saying that if you have a tank that has some secondary containment as part of the tank itself, so that square area around the container that's inside where the fuel's actually stored, that interstitial space is not going in the calculation for the tank. So it's actually just the volume that's holding the hazardous liquid or gas, not the secondary part of the structure around it.

So what happens if you have an above-ground storage tank that is considered a hazard in proximity to an activity that is considered a HUD-assisted project? Well, you have to, using the HUD calculator on the HUD Exchange website, calculate the acceptable separation distance that's required and that's based on the volume of the tank. And it gives you a distance for buildings and then also a distance for people.

And then those separation distances are applied to the proposed activity based on that measurement and if it's within that separation distance, then the activity would not be in compliance with the regulation unless you have mitigation that's approved. And usually mitigation for this purpose has to be verified by a licensed engineer. And we do have a HUD engineer, Nelson Rivera, who's here in the presentation. Other engineers could also make that determination as well, but that's something that -- mitigation is a requirement if an activity that meets that definition is within that acceptable separation distance, if it's unacceptably close to the hazards.

So this is what the acceptable separation distance calculator looks like. A lot of you are probably familiar with that. This is the HUD Exchange webpage on the left and then on the right you see the actual inputs in the calculator. So the version that's on there now is what you'd see if you were doing the separation distance for a propane tank, for example. So it's an above-ground container.

If the answer to that were no, you wouldn't be covered by the regulation and the tool would tell you that. But it is above-ground storage container. It's under pressure because it's holding a gas, a liquified gas. It's not a cryogenic liquified gas, so the answer's no there. And then the tool doesn't allow you to input for whether or not it's diked because it's not a liquid.

The container volume is entered, it's a thousand gallons here. And you can see that gives you a separation distance, ASD, at the bottom. For blast overpressure of 219 feet for thermal radiation, for people of 276.5 feet and then for thermal radiation for buildings of 50 feet. So for a thousand-gallon propane tank that's what you would have to meet for an activity currently or you'd have to implement mitigation if an activity meets that definition of HUD-assisted project.

Okay. So knowledge check two, the question here is, "If you have to do mitigation for an above-ground storage tank where you're within the acceptable separation distance, who's required to verify that mitigation in order for it to be acceptable for the HUD-assisted project?" I'll give you just a second on that.

Okay. So the answer to that is, a license engineer would be required to verify that mitigation. And we also had a question come in on the question and answer panel that we wanted to address.

So someone asked whether there's a link when we have these knowledge checks to be able enter their response. And actually, we don't have that in the presentation today. So these questions are more for you to answer in the notes and we'll say the answer as part of the presentation. So there's not a link to answer these knowledge checks in the zoom interface right now. Thanks for that question though.

Okay. So now we're to the purpose of the webinar today which is that we have a change in the coverage under this regulation. And so we had a publication in the Federal Register, January 24th, last month, in 85 FR 4225, the final rule conforming acceptable separation distance standards for residential propane tanks to industry standards. And so this is a final rule. There was actually a proposed rule that was published in December of 2018.

So there was a long process, give it public input, to reach the final rule and actually an increase in the tank volume that was covered from the proposed rule. And so the final rule that was published January 24th, which goes into effect Monday, February 24th, changes the definition of hazard in the 24 CFR 51 C to exclude liquified petroleum gas containers of a thousand gallons or less from the definition of hazard and, therefore, from coverage under this rule and the requirements for separation and from the HUD-assisted project or mitigation.

And then the rule also, as a little bit of housekeeping, caused by this practice that I mentioned where we do not consider below-ground containers to be covered under the regulation because they're shielded by topography has a hazard.

So this is what the definition has looked like previously of hazard in the reg. And actually, the pipeline exception is in the introductory paragraph and then it goes into the 100-gallons or less and the shielded by topography. And this is the revised definition of hazard of 24 CFR 51 C that the rule changed. And so it kind of reorganized the structure so it's more clear the pipelines are accepted, those are added in Number 1, and then the new sections are Number 4 and 5 within the definition.

So underground storage containers it more clearly excluded from coverage. And then the main addition containers that hold LPG of a thousand gallons or less if the containers comply with National Fire Protection Association, NFPA Code 58, which is incorporated by reference in this definition of the Code of Federal Regulations. So just a closer look at the added text.

So a couple of things to note about that change and what's there. One question is, why do we refer to liquified petroleum gas instead of propane, because propane would be the most common liquified petroleum gas that we would be talking about in these tanks.

HUD chose the term "LPG" in its rule making and its definition because, in some parts of the country, propane would also contain butane and mixed in with the fuel. "Liquefied petroleum gas"

is a term that would cover both propane only tanks and then also a propane-butane mixture in these tanks that are used for these residential applications.

And then a thousand gallons or less, just to note about how that's measured, so because of the change between liquified and then the gas phase within the tank itself, which kind of varies the amount of the material that's in that gas phase in the tank changes based on the temperature wherever the tank is located and some other factors, and so you only really have about 80 percent of the water volume of that tank that is liquified petroleum gas.

And so if our criteria is a thousand-gallon tank, you're really only talking about 800 gallons of propane as the material that's in the tank in that situation. So that's just kind of a note about another factor that went into this thousand-gallon criteria.

Okay. And then finally, NFPA 58. So we said that for a tank to be excluded under this rule change it has to be compliant with NFPA, National Fire Protection Association, Code 58 2017 or later version. And so the reason for this is because when there's an incorporation by reference into the Code of Federal Regulations, it refers to a specific point in that standard. And so HUD interpreted the 2017 or later version of that code to qualify.

And so part of the process of determining if a tank is excluded under this definition is finding out whether in the state where the tank is located, the state has adopted this NFPA 58 2017 or later version of the standard for propane tanks. And fortunately, National Fire Protection Association maintains an online site that has the code that's enforced, the version of NFPA 58, in each state and that's called CodeFinder. And I'm going to bring it up on the screen now to kind of show what that looks like.

So this is CodeFinder and it's color-coded. You can see that the sort of cherry red version or the brick red is going to be 2017, 2018, 2020 versions, which are the ones that would count under this HUD exception. So you can see that some of the most populated states would be covered by this exception. So Texas is there, California's 2017 version, Arizona 2017, North Carolina would be 2020.

And then some of the states that would have an older version, for example, if you look at Michigan, according to the CodeFinder, it's currently 2014. This is updated very frequently, so just since we've been working on this rule you see a more current version of the code being adopted in different states. And so we're hopeful that pretty soon we would have it where most states would be accepted by the 2017 or later version.

And we also recommend that if you're looking at this map to determine what code version's enforced, if it looks like the version your state is older than 2017, it's a good idea and the tool makes it pretty easy to go to the state code that would apply. And so you can actually follow-up and link to the code and just make sure that the code has not been updated to a more recent version of NFPA 58. So if the state website has a more recent version then that's acceptable versus CodeFinder. This is just a tool, but it is updated pretty frequently, so that's why we recommend to use it to make that determination.

Okay. So at this point, I think I'll just make sure we don't have any more questions that we should mention for the audience. Okay. Okay. We can keep moving on this.

So as far as the basis for the exemption, so again I said between the proposed rule in December 2018 and then the final rule that was published in January 2020, there was a lot of public input, a lot of consideration, so how did HUD arrive at the thousand-gallon propane tank exception. So you know in the past the calculation using the ASD tool was more stringent than the separation distance requirement under this rule for propane tanks. But looking at the data we actually found that LP gas is responsible for just a small fraction of home fires, accidents related to all above-ground storage tanks.

And among the fire-related LP gas data suggests that propane tanks are not the fire source in most cases. So meaning that, if you look at the system those were the cause in the accident and it involves propane tank, usually the ignition point would be the kitchen, the cooking area, not actually the tank itself. And then, there's also a lot of data that showed that propane tanks are extremely durable in general.

For example, in one study of a simulated nuclear blast, propane tanks received only minimal damage and were actually identified as a possible fuel source that would be able to withstand that scenario. So there is just a lot of data suggesting that these tanks are very common for residential uses, very safe when they followed the NFPA 58 Code, the current code, and so that's sort of the safety basis for HUD's rule making and the thousand-gallon exception.

Another question that comes up a lot is, well is there any separation distance requirement in the NFPA standard. It's different from the HUD standard but is there a separation distance that's required, and the answer is yes. There is a setback for tanks between 125 and 500 gallons of 10 feet from buildings or property lines and then for tanks between 500 and a thousand gallons of 25 feet from buildings or property lines.

And that setback distance is based on the potential hazard, the need for the fuel to be in those locations and then the possibility of leaks. And so basically scenarios that in the data on accidents are actually sources of concern versus sort of a worse-case scenario that may not be likely to actually occur. And so by incorporating the standard, HUD takes those factors into account to make it as useful as possible for people that are using propane in the residential development.

Okay. So that covers what the rule did in the standard. So what's required for the HUD environmental review record documentation? As you know if you've done HUD environmental review, if you have to do compliance with the regulation, you have to show within compliances, but if you're not covered by one of the related laws, you still have to document why you're not covered in those cases.

And so to document that you're covered by 24 CFR 51 C because of this exception and this definition, the environmental review record has to show that the above-ground storage tanking question contains propane or liquified petroleum gas, that the above-ground storage tank is a thousand gallons or less in capacity, and then that the NFPA 58 2017 or later version is in effect in that state. And that would be a citation to the standard or local code that adopted that standard

which is there in the CodeFinder as a link and then you can also go to the state website to find that documentation.

So again, just to avoid any confusion we talked about the fact that the NFPA standard does have the setback distances, but if you're in a state that has adopted NFPA 58 2017 or later, part of the documentation for HUD review is not measuring those distances. You simply have to show that you are -- the tanking question contains LPG or propane, it's a thousand gallons or less and the state has adopted that code, and that's acceptable documentation. There's not an additional measurement that's required. If you don't meet those criteria, then you would have to actually go through the normal calculation using the tool and do the HUD setback distance.

Okay. So we're to the third knowledge check. And the question at this point is, "Does NFPA 58 2017 include any setback requirement for LPG tanks?" So I'll pause for just one second on that and we'll come back to it.

Okay. So coming back to this, so as we just talked about the answer is yes, NFPA 58 2017 does include a setback requirement for LPG tanks, depending on the volume of the tank, between 125 and 500-gallons of 10 feet or 25 feet for 500 to a thousand gallons.

And we also had a question come through the Q&A chat about how you would address multiple storage tanks. So if the multiple storage tanks contain propane, then under this exception it would be verifying that the criteria we require is true for all of them. So they would all have to be less than a thousand gallons, they would all have to contain LPG propane and then you have to be in a state that has the NFPA 58 2017 or later.

If they're not propane that's covered by this rule, then we do have more extensive training and information on how to use the ASD rule for other types of materials on the HUD website, but essentially you're looking at the largest, closest container, the one that would have the biggest acceptable separation distance is the one that determines how far from your HUD-assisted project the tank would have to be. But that's kind of beyond the scope of this webinar, so we're focused here mainly on the propane exception that was added by this rule.

Okay. So next knowledge check, are other materials besides LPG propane covered by the final rule? So I'll give you just a second on that and then we'll come back to it. Okay. So the answer to this is that is no, the final rule only covers LPG propane. So there's no other exceptions that are created.

Again, it does make more clear that we don't consider underground storage tanks under this rule, but that's been HUD policy for a good while. And then it rennumbers the exception for pipelines underground but that's been also in the regulation before. So the only change in this rule is LPG propane thousand gallons or less tanks exception.

Okay. The final knowledge check, "What is the distinction between propane and liquefied petroleum gas? And which one is covered by this exception?"

Okay. As we talked, this is kind of a trick question. So propane would be considered a type of liquified petroleum gas. So propane is one type of liquified petroleum gas, another type would be a propane-butane mix. Those are both LPG and this exception covers both of those. So it covers any liquified petroleum gas container which would be mainly propane or propane-butane mix.

Okay. So at this point I'm going to turn it back over to Michelle.

Michelle Grainger: In order to submit questions to our panelists, please feel free to use the Q&A panel to submit your questions.

Zack Carter: Okay, thanks, Michelle. So I think we've had a lot of questions come in as we go but we probably have more now so do we have more questions from the Q&A panel to talk about?

Okay. So we had a question about where the materials from this presentation will be available. So we're recording this presentation and it will be posted on the HUD Exchange. And this information also a Frequently Asked Question written document and updated information on HEROS documentation will all be posted on the HUD Exchange acceptable separation distance page and that's under the related laws of the HUD Exchange environmental website. So that will all be available on the HUD Exchange website.

Okay. So at this point, we'd like to see -- yeah, I think that kind of covers most of the frequently asked questions that we've had come in. Again, we have more frequently asked questions posted on the HUD Exchange website and we'll also be available to answer your questions directly.

So I'd to now turn it back over to Marcell Choi for the closing.

Marcell Choi: Yeah, thank you all for taking the time to listen to our very eloquent presenter, Zack. Thank you, Zack. And we are here for any questions that you may have. I think the information will be on the HUD Exchange. And if you have any questions, you have the contact number, contact Zack, the program analyst and his number, and you can also contact me. You can call or send us an email. And don't hesitate to reach out if you have any question. Our desire is for you to understand this rule and to use it effectively. So thank you all for being on the webinar today.

I would also like to thank Michelle from Enterprise; we would not have been able to do it without Enterprise. So Michelle, I will pass this back to you. Thank you very much for all your help, we appreciate it. And also your colleagues at Enterprise, I think Orlando and who else?

Zack Carter: Brittany.

Marcell Choi: Brittany, we thank you all. So Michelle, I'm handing it back to you now.

Michelle Grainger: Thank you, Marcell. Thank you everyone for joining today's webinar. As our colleagues indicated the webinar materials will be posted on the HUD Exchange for further review. Thank you so much. Goodbye.  
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