EPA's Proposed Oil & Natural Gas Methane Rules: What You Need to Know
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Webinar

This transcript was auto-generated by the webinar. Please forgive typos.

0:04
Good afternoon, and welcome to the webinar. My name is Amy Blyth, and I am with Trihydro Corporation. I'd like to welcome you to our presentation, EPA's Proposed Oil and Natural Gas, Methane Rules, What you need to know.

0:23
Our speakers today are Jennifer Beaver, Director, Williams, Wheese Peeple, and Ferguson.

0:30
Dan would Air Compliance Specialist, Trihydro Corporation, J Christopher, senior cyan, ... Specialist from Tri Hydro Corporation.

0:42
With that, before we get started, I'd like to go over a few housekeeping items. This webinar is being recorded.

0:50
All attendees are in listen only mode. If you have a question, please make sure you submit it in our questions panel, and we will address it at the end of the webinar. There will be a Q and A after our speakers have presented. If we're unable to address any questions in our hour and a half together, we'll answer them via e-mail after the webinar. Also, in your goto Webinar Attendee panel, we have included a copy of today's presentation in the handouts tab. Finally, you will have the opportunity to complete a very short survey. When you exit the webinar, it will take just a minute, and your responses help us create valuable webinar experiences for you in the future. Please place your topics you'd like to hear about, for future webinar, in the questions panel.

1:44
Now, I'd like to introduce Alan Olson, executive director of the Montana Petroleum Association, to say a few words, Alan.

1:55
Amy, Like I said, I think you probably eyedropper for giving this opportunity to get a little more information on what's coming down from the federal level in regards to.

2:10
Uh.

2:11
We've got a really excellent panel of experts here, too, to kind of bring us up to speed to what's going on.

2:19
And I would definitely encourage anybody that's got any questions.

2:24
Please please type them into the comments section and I'm really open pretty good discussion financing.

2:34
Thank you, Alan.

2:36
I appreciate the opportunity. OK, let's get started. J Christopher, our moderator, and speaker today. I'm going to introduce Jay. He has over 40 years of industry environmental experience since 19 90. Mister Christopher has primarily focused on air quality issues in the petroleum sector, with results oriented, hands-on experience in the environmental consulting industry, as well as an industry, corporate headquarters and facility regulatory settings. He manage the environmental compliance program and environmental professional staff for a major refineries downstream business. J has been directly involved with negotiating a Federal State consent decree affecting for refineries and overseeing implementation of two different Consent Decree programs.

3:32
He has also been a primary negotiator regarding several state compliance actions interacting directly with state and frank federal regulatory and legal staff, but that track record of achieving practical, achievable solutions.

3:48
But that, go ahead and take, take it over J OK. Thank you, Amy.

3:54
So we'll hit the next slide, and today we plan to provide you all with about an hour and a half, including some time for questions, as we talked about, about the Environmental Protection Agency's proposed Methane Rules.

4:08
We'll cover a little bit about how have we gotten to where we are right now. EPA's proposed New Source Performance Standard that would be referred to as ...

4:16
B EPA's Proposed Existing Source stander, also referred to as ..., EPA's Proposed Appendix K, which is the OGA monitoring protocol that EPA developed, and then some things that you should be thinking about to get ready right now.

4:38
So, let's keep going.

4:39
OK, Burst, we're going to talk about, I wanted to talk myself a little bit about, some of the rules, isn't how we got to where we are right now.

4:48
The original rules that came out really focused, natural gas plants and glycol, dehydrator.

4:56
Those are the first rules, and a lot of people in the gas plant industry will still refer to.

5:01

The new source performance standard referred to Subpart Triple K, which is an elder regulation, leak detection and repair program.

5:10
And that affected natural gas plants that were constructed or modified or reconstructed after January 20th, 19 84, and went all the way to August 23rd, 2011.

5:23
It's typically referred thought of as a method 21 type rule where people are going out and doing the sniffing with with the monitors and things like that instead of cameras.

5:34
That final rule actually became, was published in June of 1985. And there have been some several amendments to triple K over the years.

5:45
The modified it tweak some of the language. Another one that a lot of people don't track, but wanted to I wanted to mention here just for completeness, is a national emission standard for hazardous air pollutants and the shaft rule. Sometimes, most people refer to it as a mapped rule. And it's called subpart HH, and it focuses on benzene from glycol dehydrator.

6:08
At the production site, there's actually a, there's also a similar rule, triple H, which refers to more downstream type applications in the transmission sector, But that rules also been published and modified several times over the years, as well.

6:26
Next slide, please.

6:31
Then came the, what I refer to as the Production oriented Regulations. They're the ones that most people are thinking about, especially on the the upstream oil and gas production sector.

6:41
First, there was ..., that's a new source performance standard.

6:46
And it apply to facilities that are, were construct modified, constructed reconstructed after August of 2011 and before September 18, 2015.

6:57
That roll first came out in August of 2020, 2012 and it was amended several times over the years, which keeps a little challenge to keep up with all those details.

7:10
Then came the infamous quote OA. That's what most people are thinking about and dealing with right now in the upstream side of the world.

7:18
Quite away, was finalized in June of 2016.

7:23
It applies to facilities that were constructed, modified or reconstructed after September 18th, 2050 and again, there have been several modifications since that period in time.

7:36
Next slide.

7:39
Now, things get really complicated in this one. I wanted to show mammalian quite away.

7:44
Uh, since ... came out, and a lot of you remember and have lived through these changes, there were a number of different steps, and activities, and reason, rescissions and things like that, that happened over time.

8:00
This bar chart is not totally lined up from a linear standpoint, in terms of the spacing, but it gives you an idea of the read all the different steps that have happened, including some stays that occurred and quarter way.

8:16
And then under quite away, also some some rules that were finalized in September of 2020, 1 of which was rescinded through the actions of the Congressional Review Act, which happened in in the current congress and administration.

8:34
And that one should pull back what a lot of people generally referred to as the policy rule which really addressed more the whether methane was unregulated, pollutant the inclusion of the transmission sector.

8:48
But also created a pathway directly for, including the establishing that the existing source guidelines through the Clean Air Act under Section 111.

9:02
So, with this, I'm going to go ahead and transfer over after this slide to Jennifer Beaver. I thought I'd give a little background for Jennifer.

9:11
Before she starts, Jennifer's, a director at Williams Weise Pebble in Ferguson.

9:16
She's a licensed attorney in Colorado, North Dakota, and New Mexico.

9:20
She's a Director, Williams will use, and assist companies with respect to all aspects of State and Federal air quality and climate change, regulatory regimes, regimes, including rules and guidance development, permitting implementation of guidance programs, self evaluation of compliance and enforcement.

9:39
Jennifer is one of the leading legal experts on the methane emissions from oil and gas sector, having led industry's efforts and Colorado's numerous methane rulemaking, and having represented several companies in enforcement at the state and federal agencies with respect to emissions from oil and gas storage tank facilities.

9:59

Jennifer has represented a range of companies in the Energy and Natural Resource Base, from the oil and gas operators, pipeline companies, ski areas, mining companies, and industry trade associations.

10:12
Jennifer will be sharing EPA's proposed NSPS, Quad OB, and Quite OC Proposals.

10:21
And Jennifer, I'll turn the presentation over to you.

10:25
Thank you so much, Jay. I'm really happy to be here with all of you today. I think Jay did a great job of explaining the quagmire that is quite as I like to say, what you know, one of the things that I thought about doing, but then I figured It would make you try. And guess my age is You know what? It was to do a poll on, what quad letter will they be on when I decided to retire. That's kind of my internal, ongoing, but that I keep placing with myself. Next slide, please.

10:56
So today, I'm going to talk to you about quite a, B and C And kind of what they are, and what we know, and what we don't know. And, unfortunately, frankly, in this circumstance, there's actually a lot. We don't know. And we're waiting for some more information. I think Jay did a great job of explaining to you kind of the history on Claudio and quite away.

11:19
And many of you are going to know some of the basics of this with respect to acquire A, B, and C, But ..., B, as J alluded to, is E, is the new and modified new source performance standard. So, it's for new and modified sources.

11:35
And currently, they are essentially saying the effective date for that was November 15th, 2021, and I'll get into some of the issues and the concerns about that timing in a minute. And then C is going to be for existing sources, and what's interesting is that it's technically arguably not a rule in the same way we think of quite OB as being a rule. It, some guidelines that, ultimately EPA will publish that.

12:04
They will then require the states individually to look at those guidelines and develop their own program, and, you know, it's, but it's gotta be essentially equivalent to the program. That's the guidelines that are proposed by EPA, and so states will ultimately take on the role of adopting actual, existing source rules pursuant to aquatic C, But what EPA is doing will really set the stage and the standard for what the states are going to have to do.

12:35
So, before we get into sort of the nuts and bolts of, like, the equipment that's impacted and some of the changes that are pretty dramatic from the last round, I just want to raise a couple of, you know, outstanding questions. When the rules, when the proposal came out in November, there was no rule language, a company.

12:55
So, in many cases, that's made it pretty difficult to figure out exactly what they're intending. And, you know, we have quite in quite a way to look back to for many of the concepts and some of the rule language, but we really don't know. And so the, the lack of rural language has done, I think,

a few things. one, it has made it difficult to comment on and difficult to really understand the implications. And that's particularly important because, you know, they're saying that you became a new modified. or if you are a new modified or reconstructed source after November 15, then you would be subject to it.

13:33
But the real question is subject to what you wouldn't even know currently how to design a facility that was new to comply with the rules because you don't have any rule language. That's gonna be an issue that I think is gonna play out from a legal perspective as this goes forward. I know that it's been raised to EPA in numerous comments, that it's not believe they have the authority to make the effective date in November if they have not submitted the rule language. But, to date, to my knowledge, EPA has not really been willing to make that modification or say that they're gonna, they're gonna change things.

14:09
I could see them making some of the, the interpretations on even a source by source basis depending on how this goes, and additionally, what they made very clear in their November 15th, ruling or proposal, not real language is that they are going to be submitting a supplemental. And that supplemental will contain the rule language for kind of all the concepts and the the detailed pieces they laid out in the November 15th proposal. But it will also flesh out areas which we'll talk a little bit about, like picking and truckload out that they really didn't describe in any detail at all. But, that they asked for comments and information on, And so the supplemental, which I understand is likely to come later this summer, is going to have not only the rule language for what we've seen today, but likely new rule language if they decide to proceed with any of those other source ingredients.

15:10
Another question that we get a lot is timing on the admissions guidelines, and it's really not entirely clear.

15:18
Currently, EPA has allocated no cost for the existing source rule until 20 26, and so, it seems to be that they, they believe that this rule, you know, if it came out in 20, 23, states, would likely have, you know, a couple of years to get the emission guidelines adopted into rule and then become effective. There's been some litigation on kind of the timing of when emission guidelines become implemented. And so, but EPA has not been 100% clear on what it thinks the timeline is for here, other than the fact that it hasn't allocated cost until a few years out, which suggests that it won't be immediate. And then they also do specifically in numerous places. Kind of anticipate a phase in for certain existing sources, like pneumatic, controllers and others, where they recognize that there's going to be a significant amount of work to be done.

16:18
Next slide please.

16:21
So, let's talk about what does this rule cover, or it might be easier to talk about what the rule doesn't cover frankly.

16:27
So, the rule covers kind of a whole host of sources that you would find at upstream facilities as well as at compressor stations, natural gas processing plants and when I say compressor stations,

I think that means both, that means the compressor stations in the gathering and boosting segment, but also compressor stations in the transmission side.

16:51
And again, I think as is, Jane made clear this is, you know, um GHG rule on methane rule. So it's not it's not limited to the OCS although there are still a few places where it's the seas are that the sort of trigger pollutant for certain things, but in many cases they have actually switch that to be methane. So what are the sources? storage? Vessels and storage?

17:19
Tank batteries. Fugitive emissions. Both at well sites, at what they term centralized production batteries at compressor, stations and gas plants.

17:30
Pneumatic controllers: pumps, which historically has included pneumatic pumps but is now going to include diaphragm pumps as well.

17:42
Well, unloading, picking and below downes is one of the sources that not expressed exactly what they're going to do as well as you'll hear later.

17:51
But that's one of the sources on the that they're considering: truckload out, um, associated gas, venting essentially, you know, either venting or potentially requiring flaring from separation equipment when you can't get into a gas sales line.

18:07
Compressors and Control devices, the actual control devices that are used on the pumps, the storage tanks, the associated gas venting, and then a few other topics like sweetening units and abandoned wells. Next slide please.

18:24
So, let's talk about storage vessels. Um, what they're doing with storage vessels is, is pretty significant. And as many of you probably know, there is a lot of history around storage vessels under quite, quite away.

18:39
And generally with EPA, know, there has long standing been, kind of, when EPA first did this, they did the, quote, unquote, away on us. Individual storage vessel by storage, vessel, basis, as opposed to a battery. But the reality is, is that for most facilities, particularly, new facilities, you know, most of these these tanks are in a battery. They're not typically single single storage ***. And so what that had done is create a lot of confusion and their regulations are not very clear currently on how you calculate the emissions from a battery for each storage vessel when they are part of a battery.

19:22
And so, there's been a lot of disagreement among EPA and industry about what is sort of standard practice for that. And, in addition, storage tank batteries have undergone a series of enforcement cases have throughout the country. You know, EPA, I think, has, has issued consent decrees with 10 to 12 different companies, some of them as recently as last month on emissions from storage tank batteries. And, typically, that's emissions from, you know, thief hatches, and pressure relief valves, that they believe should be making it to the control device. So, what we've

seen in sort of the conceptual information, we were provided in this quad OB, is what I think is an attempt to address. Some of those concerns are outstanding issues with respect to storage tanks.

20:11
So one of the biggest things is, is instead of it being an individual storage vessel, ..., and again, that's effective now if their November 15th date holds.

20:22
If you, do you put in a storage tank or a storage tank battery after November 15th of 2021, you would ultimately be subject to their final rule if they are either vapor or liquid vanna folded or if the tanks are adjacent.

20:41
And, you know, it appears that EPA sort of trying to mirror what Colorado has done for for a long time over a decade, but they, they go a bit further than what what Colorado has done in Colorado. It's really has to be liquid manifold. So, you know, your comments ain't tanks or your crude oil tanks and your produced water tanks are not considered part of the same storage tank battery. They can be vapor. Manifold it together, and share a combustion device, but it doesn't mean they're necessarily the same storage tank. Batteries.

21:12
Here, EPA's definition by saying either vapor or liquid manoj folded.

21:17
And they also use the term adjacent, meaning they describe it as if they're, like, on the same pad and located near each other.

21:25
While I think that potentially moving to a battery model makes sense and will eliminate some of this ambiguity around, still, individual storage vessels, where they think they've got a little too far, because I think it's going to be pretty complicated and not necessarily appropriate to combine different types of storage tank batteries like produce, water, and crude oil.

21:48
The second thing they've done is, they have put in a, they propose a six ton per year battery BOC threshold for a 20 ton per year, methane threshold.

22:01
And so instead of, you know, historically, it was always six tons per year for the individual vessel.

22:08
So now this would bring in a whole lot of additional storage tanks because historically, when you had a battery and perhaps if you are averaging are taking an average of the tank commissions, you could have had potentially 10 tanks at five times per year with a 50 time for your total emissions and still taken a position that you aren't subject to. The ... are quite away, and here that, that would really eliminate that, that issue.

22:36
I think one of the other really big changes that they claim as a clarification, although some of the language that they've submitted, also makes clear that it, it may really be a change in the rules,

and not a clarification, is they've been much more clear about when they think a storage vessel. Our storage tank is modified for purposes of triggering quad B And I think that's gonna be really important, because there's a lot of, you know, part of the reason EPA's making these changes is they have not gotten as many think tanks that are subject to ... as they had expected.

23:12
And so, they made this modification threshold much more conservative, so that it's much easier to trick.

23:18
So, they basically say that any single vessel or battery is modified when a physical or operational change is made to the storage vessel or tank battery that results in an increase in potential methane or VOC, emissions.

23:32
There's some real uncertainties there, in particular, because we don't have real language. For example, what do you compare the emissions increase against? Is that against when you first did your analysis, about whether you are subject to ... or ...? Is it against the day prior to the emissions increase? They have been clear that the addition of storage vessels under this Increase in storage capacity, or any vessel that receives additional oil condensate are produced water. Like, if you had a well, that those would all be modifications under this new proposal.

24:09
Then perhaps pretty significant is some of the language they have on storage vessels around legally and practically enforceable.

24:17
This has been an issue that's coming up across the country in terms of particularly with control devices.

24:22
and what are the parameters and what are the types of things that that you need in place to ensure that they're legally and practically enforceable. And they have had, and always, historically, have said that.

24:33
if you have legally and practically enforceable controls on pursuant to a state regulation, then you can use the P T half your P T after your control to evaluate your whether you are subject to the NSPS. And that's still holds here, but they are now proposing to make what is what is required for legal and practical enforceability, pretty, pretty stringent. So they suggest that you have to have a quantitative production limit and a quantitative operational limit.

25:06
They say you have to have an averaging time for production that's less than or equal to 30 days.

25:12
You have to have parametric limits. You would have monitoring of those parametric limits, and you would have to have record keeping and reporting.

25:20

And I think the key is, you know, I'm not aware of a state, even though there's many states that have pretty stringent control requirements that would actually likely have all of these parameters in place currently.

25:32
in order if EPA keeps this, this kind of legally and practically enforceable threshold, Next slide, please.

25:41
So pneumatic controller.

25:43
So this is probably the one that many of you are the most concerned about, and it's probably the one that I think is probably one of the most concerning. Um you know under the current requirements, you know it really has focused historically on whether you had high bleed pneumatic controllers and sort of phasing out of high bleed pneumatic controllers. But it allows you to have intermittent pneumatic controllers or locally pneumatic controllers.

26:12
This new proposal would eliminate essentially natural gas driven pneumatic controllers except for certain exemptions in Alaska.

26:24
So it's kind of it's kind of an interesting proposal.

26:28
So they would say that each pneumatic controller is ineffective facility and they would say that all new modified and reconstructed controllers have to have zero emissions.

26:41
zero emissions does include what they call self contained, which means it goes back to process, that to the instrument here. It could be an electric or a mechanic controller. I think one of the things that's not entirely clear because we don't have language is whether self contained includes the ability to route the natural gas event controller to a control device somehow. I would argue that it should, because that certainly some of the technologies that are out there and available, and so on.

27:16
And so what's interesting, though, is they want you to maintain documentation, that you're not an effective facility.

27:23
But if you don't.

27:24
if you come clogged with this rule, IE you have zero emissions, then you're not an affected facility, because the effective facility is only pneumatic controllers that emit natural gas.

27:36
So it's kind of this really strange do loop, where if you, if you, if you aren't affected facility, IE, you meet natural gas, then you have to not have natural gas pneumatic controllers, which will, then, I, would argue, would make you not an effective facility. So, it's kind of a very interesting quagmire, but it currently does not have, other than an Alaska limitations for: Do you have

electric power? You know? What is are you going to have to put a generator out there and generate emissions associated with the generator to do this, and you know we've faced the issue of pneumatic controllers in Colorado on a number of times over the last four years. And industry and the agency and environmental groups and local governments had worked pretty closely together to come up with a pneumatic controller rule.

28:28
That was actually based on, I'm kind of total throughput through pneumatic controllers and with the assumption that actuation are really what drive emissions for pneumatic controllers. And so that as long as you have certain percentage of your throughput, was through non emitting controllers and then you really met this. You met the requirements in, your, we're reducing emissions. This really addresses just each individual controller and there's not a whole lot of out. I think this is going to be one of the most contested pieces. You know, I've heard a lot of concerns about vendor availability on this, and how we would get to having you know, getting this information, or getting all these these done for all the people who need them. And in particular, because they've also propose the existing source guidelines to require zero meeting pneumatic controllers for existing sources they expect that with phase in, but again, there's no specific timeframe.

29:27
Next slide, please.

29:31
All right? This is my other one. This is my one, the fugitives.

29:35
This one I actually think, has some really concerning pieces.

29:38
So this would apply for well sites. If you had a baseline of a mix of methane emissions, three tons per year are great.

29:47
And I think one of the most concerning pieces here is not the fact that you would have to do quarterly leak detection for those.

29:54
It's that they want you to do a baseline emissions threshold.

30:00
They want it didn't. They say that it might include malfunctions?

30:05
And they want it's essentially, in my opinion, a site specific methane inventory.

30:10
Because they basically mandate that to determine whether you need to comply with this rule, you would have to develop this baseline inventory, then there's language in the proposal that says that if there is any increase, operational, or physical increase, or change that increases the emissions, you would have to redo the baseline emissions thresholds. And I think that is just a completely unworkable scenario. There should be no reason to redo your baseline emissions thresholds,

unless for some reason, you were gonna go over more stringent requirement or under the requirement in the first place.

30:50
They also have some, um, concerning language about no emissions from closed bent systems and how quickly they require repair. So, as you probably know, in a leak detection program, you typically have a 30 day window to repair it, or maybe even longer.

31:08
If you need to go on delay of repair, this suggests that they're gonna come out with language that says from a closed event system. So, like from a thief hatch or from a PR V, and I think that's because they think these could reflect concerns with design or over pressurization of tanks.

31:25
Then you have to repair it as soon as possible. And that any emission may be a violation of the no detectable emission standards that are currently in the ... and quite away rules, but have not historically been viewed in that manner.

31:40
Um, another piece on this is, you know, control devices, which you'll hear me talk about a little more in a minute, are really getting extensive attention. And they are reflected in this rule that control device malfunctions. So your pilot light goes out, blown out by the wind or other operational upsets, our potential violations.

32:01
Um, they also have some concerning language about repairing and possibly doing a root cause analysis for all of these. You know, that has been a part of the Storage Tank Consent decree requirements that I mentioned earlier.

32:15
But not for every emission, and so I, you know, I don't think it's appropriate to have to do a root cause type analysis every time you see a leak and you're able to repair, you're gonna hear a lot more from Dan on the Appendix K and the ODI protocol.

32:33
Ultimately, I think I mentioned this, the frequency would be quarterly for well sites.

32:37
If you're over three tons per year of methane or quarterly for any compressor station, there would be tiered repair deadlines based on the severity of the leaks which also raises questions and concerns about whether you actually have to have, you know, a PID or some other quantitative metric that would allow you to determine what the actual severity of the leaks are.

33:01
There are also a bunch of provisions regarding alternate screening technologies. So, you know, flyovers, use of drones, use of planes and how you would be able to replace the like on the ground. ... inspections with, with those currently they seemingly would make you do the screenings for the for the aerials more frequently, bimonthly, with annual ogi in order to eliminate the quarterly AGI required.

33:30

Um, they have in raised questions about the potential, and this has come up in Colorado and New Mexico and probably other states about how third parties might identify emissions events. And obviously with all the technologies that are out there, that is a concern.

33:47
And so, you know, one of the things to keep an eye out for is where EPA heads with. What would they do with the information from third parties on on emissions events that they find from their own flyovers?

33:59
And then finally on the few digits they basically have an expanded fugitive emissions component definition so they now include pneumatic controllers and control devices. And you know historically pneumatic controllers they bent and they're designed to vent natural gas. And so they were not included in that this sort of follows a program Colorado has where they do require ODI on pneumatic controllers to determine if you if they're operating properly.

34:27
Next slide, please.

34:30
All right, well liquids: I'm loading.

34:33
Um, so, one of the things it's a little unclear is language in the rule, in the proposal suggests that this is limited to gas wells. But, again, because we don't have language, it's not 100% clear.

34:47
It seems like it probably should be limited to gas wells. Because that's really where, well, liquids unloading occurs.

34:54
But, it ultimately requires liquids unloading with zero methane, or VOC, emissions, unless it's not technically feasible or safe.

35:04
And, in which, in which case, you would use the MP's if you could not do it. Because it's not technically feasible.

35:13
This is a pretty stringent requirement. You know, Colorado just adopted a well liquid unloading rule, I think the first in the nation, it does not require zero, or V methane, or VOC, emissions for all will liquids. It has a threshold and is based on how many times a facility might unload and allows for, for a whole host of other considerations. There's two ways they're thinking about this. Well, liquid unloading.

35:42
one is option one, which is that the affected facility is this is defined as every well that undergoes liquids unloading, regardless of whether that liquid unload events to the atmosphere. So, here, that would include plunger, artificial lift.

36:00

So, something that is defined as well, liquid unloading, even if it doesn't emit to atmosphere, then, that facility would be ineffective facility. And, you would have to maintain the records of the number of a unloads, even, if it does not admit.

36:16
That seems highly problematic.

36:18
to me, given that many of these artificial lift scenarios they're designed, they don't event to atmosphere necessarily. And, I don't know that everyone has a track on how often those are operating or unloading.

36:33
The second option is that the affected facility would be every well that undergoes unloading, using a method that is not designed to totally eliminate venting.

36:44
So, if you having missions from your affected facility from your well during, well unloading, then you would be, it would be subject to ....

36:54
And, um, know, it's interesting because, ultimately, there really is no ... for well unloading because every well unload would be a modification.

37:08
They basically suggested, so that you would you would always be triggering quite obie, if you did any online.

37:17
Next slide, please.

37:21
So a couple of others that I won't go into as much detail on, but reciprocating compressors, so there are existing requirements for reciprocating compressors for you to replace Rod Packing. Either every 26,000 hours of operation or three years. Whichever occurs more frequently.

37:39
they are considering and and another mechanism here for reciprocating compressors, which would be to monitor the rod packing emissions annually using some sort of flow measurement, then replace the Rod packing when you exceed two Scott's per minute or you could route to a process via closed event system under negative pressure.

38:01
I've understand that that to a CF per minute could be particularly problematic and another piece of this is that in any event, no matter where they land on reciprocating compressors, those historically been excluded from production facilities. And now they will apply as proposed at Centralized Tank. So if you have a centralized tank battered, even though it's in the production segment, reciprocating compressors at those facilities would either have to comply with this new requirement or probably, if they stick with the three year 26,000 hour requirement.

38:36

Pumps, just wanted to note that it now under this new proposal would include natural gas driven piston pumps in addition to diaphragm ups. Next slide.

38:49
Alright, couple more associated gas layer. So, this is from the separator. And, you know, they essentially say that they think the best system of emission reductions is to route the associated gas to a sales line.

39:04
They define the affected facility, as any oil well, that produces associated gas. So I think that means it's pretty much every oil well.

39:13
And so they are saying you should route it to a sales line, then if you can't, they require you to flare it.

39:19
You are not allowed to vent it, and you would have to meet the player requirements at 60.18 as part of that part of the proposal.

39:29
two of the things that I mentioned earlier that they are looking at is for picking in truckload out. Those are ones that they did not have a real proposal, conceptually thought out that they are looking for information on.

39:42
Um, you know, Colorado regulates truckload out and also just adopted rules for pigging in the mid-stream sector. And New Mexico. they're not totally released in writing yet, but they just adopted last month some pigging requirements on there that includes more than just mid-stream also upstream. And so they, they've thrown out there for picking some of the things they're thinking about, whether it's controls, reducing the pigging frequency, eliminating the venting during it, or other liquids management techniques that would reduce the emissions from painting.

40:19
Next slide, please.

40:22
All right, so, control device is one of the things that I'm not entirely sure, but they mentioned something about considering using control efficiencies, at 98%.

40:33
It's unclear, because we don't have real language how that would impact.

40:38
All of the existing facilities that currently use control devices that are only have 95% or states where they don't let you take more than 98% control, even if the manufacturer's design says it's more than 98.

40:54
Sometimes don't only let you take 95. So it's one to keep an eye out for when we see the rule language. And then this again, as I said, this is getting to be a priority issue for EPA. They want, potentially are considering additional flare, performance measures, whether that's monitoring a flow, pilot, flames, visible emissions, or continuous flame and imaging systems. Colorado just

developed a Flare performance or combustor performance rule in December. and I think there's going to be, there's a lot of concerns and a lot of was a lot of discussion in that rulemaking on low flow for flow metering. You know, when you can conduct performance tasks, the methodologies for conducting performance tests, and so I think that this one's going to again be one to watch pretty closely.

41:43
Next slide, please.

41:46
So I think, you know, there will be another opportunity to comment, as I mentioned, when the supplemental comes out, at the end of the summer. And, you know, just kind of, keep an eye on the state rules for existing sources.

42:00
You know, many states already have existing rules, and no pending. And they will also have to be looking at what the new, what the rules come out for quite of C, and how that dovetails with the existing requirements.

42:17
And then, timing, EPA is proposing a two year compliance timeframe, following whenever the state submits their plan submit, which, again, we don't know entirely.

42:28
Um, I am now going to turn this over, I believe, to Dan, or maybe I'm turning this back to Jay. Jay, am I turning it back to you?

42:39
Yeah, I'll do a brief little intro to Dan here.

42:43
But thank you, Jen.

42:45
Mentioned, we're holding questions until the end, but if anything, Jennifer just talked about, sparked some questions in your mind or anything like that, please be sure to go ahead and submit questions, and the questions tab, or the chat tab will find them.

43:02
So that you'll see that on the attendee panel, and you can go ahead and just enter the questions in, and we'll be able to capture them at the end.

43:11
And again, as Amy mentioned earlier, if there's any topics you'd like to hear about in future webinars, please place in the questions panel.

43:19
So next step is **** what, Dan is going to give you his perspective on Appendix K and I think you'll find a lot of some pretty interesting things here.

43:31
If you really haven't paid attention to what this particular protocol is looking at, Danza compliance, their compliance specialist, try Hydro.

43:39
These are oil and gas air compliance team, and he knows more about optical gas imaging than I'll ever dream of.

43:48
His experience includes project management and regulatory support for companies effected by federal, state, and local air, environmental regulations. You specializes in rules related to OGE's project experience includes OGA surveying using the Infrared Camera and natural gas compressor flow.

44:07
Flow vent measurements, permitting assistance, submissions, modeling, calculating oil and gas emissions.

44:13
Method 21: Monitoring, Consent Decree Compliance and he's the air Technical Lead for Dry Hydro Sleep Tracker Pro OGA, Fugitive Emissions Software Data Solution.

44:24
So, Dan, I'll go ahead and turn this over to you now.

44:28
Thank you, Jay.

44:30
Well, thank you everybody, again for, for joining us.

44:33
and, yeah, Jen did a really, really good job explaining, you know, quite quite OB ... getting into the weeds there. And, you know, ultimately, at the same time, we had this Appendix K proposal come out.

44:47
And something that Jen alluded to was, you know, we don't have read text for ..., B, or C at this point. But we actually do for, for Appendix K it came to Appendix, K was something out there that it came up. And, you know, kind of in passing, we really focused on, oh, we when we heard about ..., see if we could be talking existing sources. You know, that got a lot of the publicity and a lot of the attention.

45:12
Ultimately, especially from the fugitive standpoint, Appendix K is something that, you know, we actually are going to have to be dealing with, and likely will be referenced in ....

45:24
Now, what is Appendix K? Amy? Next slide please.

45:30
You know, ultimately, you know, Appendix K it's a written protocol for ... Survey requirements. So, you know, in the past we've had met the 21. You know, they gave us those requirements for using a ... using a sniffer being, able to detect leaks. But we haven't really had anything in the AGI world. You know that the best thing that we had was, when they release the alternative work practice, you know, where it gave a little bit of information. In a few details. As to how we can, we can operate the camera, details are instrument checks.

46:02
But really didn't get into What do you need to do as a part of a survey?

46:07
And so, you know, ultimately, you know, It's a good thing, you know? it's gonna allow us to Complete these surveys consistently across the board. Doesn't matter what company or You know, who you're working with or For it, We're going to have consistency there, but ultimately you're gonna see as we go through some of these slides that, You know, there's a lot of things out there that it's going to be challenging to implement.

46:33
You know, ultimately, we're probably going to see, you know, some, some changes, and some updates as we get a final, final version of this. And, you know, something that's key to note is, this is still just a proposed rule. But one takeaway, you know, I mentioned the ..., we'll see references there. But right now, we're not seeing any references in Any other rules.

46:57
So for those rules like Quad Away, or, you know, for those facilities that are using the alternative work, practice to comply with other elders rules at a gas plant or refinery, you know, Right now, there's no references there.

47:13
So until we actually get reference to Appendix K within those rules, you still technically wouldn't need to follow Appendix K Next slide, please.

47:24
So, for the first time ever, we have requirements for camera operator training, Hero, and a lot of rules out there. In the past, especially quite away.

47:36
We, their requirements within the rule, to provide, report, basically, information on training and experience, but technically, you know, it could be zero, you could say, zero training, zero, and zero experience, and that's OK.

47:50
And, but at this point, you're going to be required to actually have full, robust training.

47:58
And there's a couple of concepts here that they refer to. one is Senior ogi camera operator, and the other one is just in Ojai operator.

48:07
The Senior OGA operator is going to be required to have a minimum of 500 surveys over the tech entirety of their career with 20 of those in the past 12 months. So, you can't just do surveys. You have that those 500 surveys and then five years from now, you haven't done any surveys the last few years, still be considered a senior ogi operator.

48:29
That person also needs to develop the classroom camera, Training, you know, That they say completed or develop there's, there's some ambiguity there. Is it just that, does that person have to attend a training?

48:40

So, we'll see what actually gets resolved with that, but it was, OGA operator.

48:48
We're talking about extremely robust training to get somebody going. and so you, right, now, you can essentially pick up a camera, give some give them some pointers. You know, we have some training internally at for hydro, but, you know, ultimately that person can still technically complete a survey. You know, if you're, you know, the last day of a regulatory compliance date, we can get that survey done and we can get that person to a point that they actually are detecting leaks.

49:14
But, in this situation, before completing the classroom training and all of these GI surveys, believe it or not, we're talking about 100, so, 10 where the person's observing surveys, 40 side-by-side with a senior OGA operator, and then 50 independent surveys where it's directly supervised by a Senior Ogi operator. So, you're talking about a total of 100 surveys that this person's going to be required to do before they can even independently conduct the survey.

49:47
The other kind of requirement that I that I find really interesting is this concept of zero misleads, based on a senior ojai operator file following up. So if you can please do a survey.

50:01
You have this final site survey test and you even find one leak that the trainee didn't find.

50:08
That person is going to have to kind of read. you know restarts under the and not necessarily the survey requirements but some of the training itself.

50:19
What I'd like to bring up here is this concept of site surveys.

50:25
It's, it's something that it's pretty ambiguous. We expect some changes. You know, we're hoping that maybe this is going to turn into like an hourly requirement.

50:35
Because as you guys know, there's there's a fundamental difference between an upstream production well site survey versus a refinery survey or a gas plant survey.

50:45
You know, we're talking about very different durations, very different, you know, what, what does that survey? What does the number of sites? And so it's something that's really ambiguous, There's been a lot of comments submitted in the docket for that, so that, hopefully that's something we're going to see some updates and some changes.

51:03
The other thing, getting into this training, refresher.

51:07
So, any, any camera operator that has has not conducted a survey, you're, in the last 12 months needs to be retrained.

51:16

So, this brings up a, a challenge in the world where, you know, a lot of times you'll have your ..., primary ogi surveyor completing surveys.

51:29
Then you might have a, an operator or a maintenance person.

51:32
Or, you know anybody out there, you happen to have a camera out where you can re survey Elite.

51:39
You know, there's a left left open leak from a survey, Well, if that person isn't trained according to these requirements, they're not going to be able to confirm that leak using the camera. So that's gonna kinda go fall back on. Can use soap bubbles, can use a TBA, you know, via method 21, you know, how do you do that if you don't have that training.

52:01
Next slide, please.

52:05
So, for the first time that I've seen in terms of trainings, they're also going to require performance audits. So, not only do you need to be trained, But they want to make sure that you know your performance, you're finding leaks and that your performance is valid.

52:21
And, you know, right now, the requirement is going to be quarterly.

52:26
So, in a lot of cases, we're talking about doing performance audits, at the exact same frequency as you're doing some of your surveys, you know, on that quarterly scale. There's two possible methods: permissible.

52:44
one is comparative monitoring for four hours with a Senior ogi operator.

52:49
And the other is four hours of unedited Uncut video that you can send to a node senior OGA Operator where they're going to go through that.

52:58
Make sure that, first off, you didn't miss any leaks but also that you're following all of the steps and procedures to that you actually can be detecting leaks.

53:09
And what's, what's kind of a scary thing for a lot of us here, is, you know, if you miss a persistent leak or, you know, failed, if you know that senior OGA operator thinks that maybe you didn't follow some sort of proper technique, Well, now you have to go back and repeat a portion of that initial field training. And, as you guys just saw there, it's robust. There's a lot of training and requirements there, and it's going to be a challenge for us to implement.

53:36
Next slide, please.

53:40

So, getting out of kind of the no requirements for the ojai operator or the person running the camera, you know, before you even can start a survey, you know, we're going to dig into these, you know, the surveys themselves, What do you need to be doing as a part of the surveys?

53:59
So there's a new concept called in an established operating envelope.

54:05
So basically what that is is what are the possible conditions that you can actually conducted a survey and be effective, fine leaks, and this is something that you have to set up in advance.

54:18
It can't be something where, you know, you can it, you know, stick your finger in the air and go, well. I think it's good today.

54:25
We have to have quantitative data here.

54:29
And one of those pieces is monitoring for changing conditions. So, you know, as weather changes over the course of the day, you know, we all live out West here. We're at an area that we know that, you know, an hour ago, whether to look a lot different than what it is now.

54:47
That gets pretty problematic for us, because if you have an established operating envelope and now all of a sudden that changes, does this change your viewing distance? That's the easy fix. You just get a little bit closer to equipment to make sure that you're finding leaks.

55:03
But there are a lot of other interferences that you could be dealing with, You know, and they're listed here, you know, when poor.

55:11
Difference in temperature, you know, steam Fog missed you name it, and then if any of these conditions are outside thresholds that you set limits on, you might have to actually delay your survey.

55:23
It may not just be as simple as changing the maximum viewing distance.

55:29
This is something that, I know, some of the ojai manufacturers, such as Fleer, they've actually posted some comments.

55:37
Because they actually think that in a lot of cases, we can, that, as a manufacturer, they could set some of these limits based on lab environments and set them for us.

55:49
The, the, the other side of that is, you know, when when you're constantly monitoring for weather conditions, If you happen to go outside that, by accident and you've completed a survey, that survey is no longer valid, and from a, from an AGI, you know, survey or manufacturer background. If you can't complete surveys with that device, you know, it's kind of inhibiting the

cameras best application and you're able to get out, get a lot of sites done, monitor a lot of equipment Quickly.

56:24
Next slide, please.

56:27
So, digging into the actual methodology of a survey.

56:32
No.

56:33
Ultimately, we're talking about really time consuming, and even video data intensive things that you're going to be required to collect. But also, you know, just do So, you know, a lot of us are used to doing daily verification checks. That's something that is required and even quite away and, you know, for those of you familiar with Subpart W, you know, it's another thing, you know, you're required to do, a daily instrument check, in that case, same thing, but in this case, they're requiring you to actually record a video of that.

57:08
Another video you have to take is this quality assurance video, as it's called, it's gotta be a minimum of five minutes, and it has to document all of the procedures the operator uses to survey.

57:21
So getting into those dwell times, your viewing angles, distances, backgrounds, how you're dealing and getting good Delta T.

57:29
And what Tamra, configuration, your use use.

57:33
So this is one of those things that is one of the most challenging things to implement if you have to have a video that has all of those things.

57:43
What about temperature?

57:45
Right? If you are constantly adjusting temperature, because that's a requirement of the camera. Depending on the equipment, the ambient temperature, there are a lot of temperature changes that we experience when you're doing a camera survey. And so if you have to reflect every single one of those combinations, is that really realistic?

58:03
And it's certainly not realistic in just a five minute video.

58:07
And, as you move through different process units, or one process to another, there are a lot of things that you're going to be doing differently. So, it makes you realize that this Q, A video could turn into a video of the entire facility, because you want to be able to capture all those things as required.

58:26
What are the other requirements is, you know, how are you going to conduct these monitoring surveys, where you're ensuring all regulated components are monitored, They specifically call out, in this situation, the use of a component database alone, not being a substitute to these next three approaches.

58:45
So, you know, hopefully, we'll see where Appendix K can replace some of the requirements in, for, for example, the alternative work practice, where a lot of us are dealing with, You still have to do an annual method 21 survey.

58:59
You know, that's what we're hearing, you know, hopefully all you would have to do in this situation is a ... survey.

59:05
But, know, now those old component databases, those aren't good enough, you know, so you can't use your leak dos or guide where database anymore alone, too fulfill this requirement.

59:19
You know, one of the requirements that we saw in quite a wave was the use of route map or mat with designated observation locations.

59:27
So basically you could just on a plot plan or an aerial drawl what your actual walking path is.

59:33
And right now, that appears to be probably the simplest solution. And in quite a way, they also allow now a written narrative.

59:43
And that's been a real challenge.

59:45
And how do you develop a written narrative that says, I actually viewed everything. I can tell you exactly where I was.

59:54
But here in Appendix K they give two additional options.

59:59
one is use of visual cues. So tag streamers, color coded pipes.

1:00:03
Not sure that's really realistic.

1:00:05
You know, you know, if you wanted to paint all of your pipes in a facility, you know, go to a refinery and somehow paint, you know paint pipes. You can try and do that. But ultimately, via the changing conditions, it's just not something that's really going to be realistic in most situations. And then there's the most advanced technology.

1:00:24

So using GPS, route, tracing, you know, I liked this concept. You know, anytime that we can use modern technology, that's a good thing. I would argue.

1:00:36
However, you know, that there's some challenges there, such as, you know, getting into battery life concerns, you know, that that is your device. If you're constantly, you know, any of us that have used navigation, you know, driving somewhere, we realize that, because that device is using your GPS.

1:00:52
You know, it's using a lot of power, you know, is that going to be a challenge for you in that situation? But also, how accurate is it?

1:01:00
You know, we've all been there, where we've had a GPS point that doesn't exactly put us exactly where we're at on site, or what happens when you walk into a building. Is your GPS accurate?

1:01:11
They're, you know, in most cases, you know, the cameras the GPS really isn't that good. So, using that training to get a breadcrumb trail off of a camera, we've seen it using the flip cameras. It's just not quite there yet. You're not getting an exact path. I've seen that be almost a quarter mile off. I mean, that's getting outside of, you know, are the permitting ranges that we deal with.

1:01:34
And so, you know, if, if you don't have that accuracy set, and, you know, you're not able to really prove that you've no viewed all of the regulated components and all of the equipment, that map, that shows up all of a sudden, you don't have proof anymore.

1:01:51
And so, that's a challenge that, you know, we're really going to have to assess.

1:01:54
Is that something that is there going to be?

1:01:57
You know, some flexibility there is, is he or the regulator is going to be able to look at that and go, Yep, you're on site. You did your best. It's just that you had a GPS issue. Or, is it if you didn't get right next to this piece of equipment, it looks like you just completely skipped it.

1:02:17
Another really interesting concept that, you know, none of us have really ever seen is addressing physical, medical, mental, and eye fatigue.

1:02:28
Yeah, we all, we all get tired. for those of us that have used, you know, HSM mode, for example, you know, or enhanced mode, and on some of the ... cameras heal.

1:02:37
It, it's a little bit flashy. It's a little bit distorted.

1:02:40
You probably know first, I'll give you a seizure if you look at it for too long.

1:02:46
But, you know, you're always taking high breaks during a survey, you know, when you just standard practice from a safety perspective, you don't want to be looking through a camera while walking anyway. And so, just by putting down the camera and walking to the next place, or next angle that, you're viewing equipment that, you're really getting these, you know, these ...

1:03:07
breaks in between, but the requirement is going to be five minute breaks, every 20 minutes. So, essentially, this is 25% of your available survey time in a day.

1:03:18
You know, so, two hours at an eight hour day, roughly.

1:03:21
You know, that's, that's something that, you know, some of that time, yeah, you could, you could fit in lunch, you could fit in, you know, other breaks, or other things, but, you know, this is something that we're going to have to be able to attract. You can't just say, you know, Yes, we know.

1:03:37
We kinda did it. We don't know exactly when. we're going to have to track this information to prove that this is something that we actually did.

1:03:46
The alternative here is using two ojai operators.

1:03:50
So if you have two guys available, they can had do continuous surveying, because they're kind of alternating time on and off the camera. Now, the reality is if we're in a refinery or a gas plant or just a larger facility in general, that that might be an effective solution and even still pretty cost effective.

1:04:11
But if you're going out to a well site, does it really make sense to have two trained operators out on site to be able to go through and really quickly go through a survey? Probably not. It's just not going to be cost effective. There's too much time between surveys. It's just going to be a waste.

1:04:30
It's we'll have to see exactly where that goes. Are they going to retain that requirement, since it's not something that we've ever seen historically?

1:04:39
We'll have to see once we get a final rule.

1:04:42
Next slide, please.

1:04:47
one of the additional requirements, and it's been discussed in the ojai world for a really long time, is we're talking dwell time.

1:04:57
So, how long do you need to spend on a component to effectively survey it?

1:05:05
Let alone, how many components, you could look at it the other way, how many components in, let's say an hour, can you do, When we're on a, from a map 21 side, you know, we have expectations of a person, how many, how many components you can monitor at an hour, but we've never really had that with ojai.

1:05:24
one of, one of the, using an ... camera, the benefits there are, you can look at a lot of components at one time.

1:05:34
So for example, if you're looking at a, a bunch of components that are, you know, small, little, quarter inch tubing and you can have a thousand components technically in one image because you're looking at a lot of tuning lot of compression biddings in one little small area.

1:05:49
We're on the flip side if you're looking at a 36 inch valve, you might get one valve, one component in an image.

1:05:57
What they are going to require is NaN per component, with at least two angles. So, basically, every components, we're, we're talking about NaN. Is that something that's really realistic from in Ojai, Kimber standpoint?

1:06:14
Not really.

1:06:15
You know, we're we're already just trying to find emissions. Are we going to be expected to do component counts at the same time and make sure that we're facilitating this? They do allow this complex scene chart. So on the right side of this slide, you can see a monitoring area and number of components.

1:06:36
And so essentially, you know, if you have a complex scene, they say, well, you can look, you can actually look at more components than just one every NaN, but ultimately, you know, are we going to stand there, and we're going to count every single one of these components, that's going to be really challenging.

1:06:53
We already know how long a standard component count at a facility can take, but doing that, while doing an AGI survey, it's it's going to be a real challenge and we're not sure if this is something that's actually going to be implemented, based on some discussions with EPA.

1:07:11
Next slide, please.

1:07:14
So, I put a lot of stuff on this slide and I did it on purpose.

1:07:19
There's a lot of recordkeeping associated with this.

1:07:24

Are kind of used to it in the and on the other side.

1:07:27
And as we got quite away, we realized there was a lot of information that we have to collect, but now we've got more, and there's a lot more, in terms of video, really data intensive, uh, recordkeeping requirements as well.

1:07:41
Going from your equipment records, so all of the information on your maintenance documentation, daily verification checks, getting into that five minute plus video, your survey information, so, kind of general info on your, you know, let's say, met data start and times all of that leak data. So, pictures of leaks.

1:08:04
All of the information associated with component type subtype, you know, GPS co-ordinates, all of that, what's your operator training in?

1:08:14
Audit records look like a lot of that stuff. You know, a lot of us have a certificate, but, we've been tracking all of these hours and other things associated with it.

1:08:23
Maybe not, but ultimately, you know, we're going to need some, some good solutions there.

1:08:30
You know, in my case, you know, Jay had mentioned, I'm the subject matter expert on our leave tracker team if that was something that we developed, so that we can actually comply and collect all of this information. But, ultimately, we're going to need something. We can't use Excel or Access, or yes, some of even paper anymore to comply.

1:08:55
And ultimately, if you don't document it, it just didn't happen. So, having these records available and readily available in the event of an audit. That's going to be key.

1:09:10
Next slide, please.

1:09:12
So, that's really the core of Appendix K You know, the main requirements. You know, we could get into the weeds even more than that, but what do you, what do you do right now? Is there anything that you actually can do to try and, you know, maybe prepare yourself for a final rule. So there's, there's a few things you can do.

1:09:31
You're going to want to track every AGI technicians field training and in time conducting monitoring events.

1:09:39
I would recommend doing ours, you know, but ours and surveys, that's a good thing to collect.

1:09:45
Uh, check your current ... equipment. Is it compliant, is it something that you're going to have to send in for calibration?

1:09:53
Is it even a technology that can meet the requirements within Appendix K in terms of sensitivity?

1:10:01
Have a system in place to track all of your oja camera maintenance records, and just general data management and training.

1:10:09
If, right now you're using Excel, there are a lot of solutions out there that you can use that really can collect all of this information and store it in one place and have it readily available. Make sure you're assessing those things.

1:10:27
And lastly, you know, assess your training level of personnel right now.

1:10:33
Do you have senior a senior ogi operator?

1:10:36
If the answer to that is no, that could be a real challenge.

1:10:39
You don't have anybody that can conduct training.

1:10:42
Do performance audits do any any anything associated with at a higher level, beyond an AGI camera operator? So that's something, is it something that you could get somebody to that level before this goes final and hopefully be able to grandfather that person, hit all things to be considered.

1:11:04
Next slide.

1:11:09
So I'm just going to touch on a few things, something that we're, you know, getting, moving away from Appendix, K, you know, we're dealing with a lot of ESG related items now, you know, ESG, it's the big word, it's the flashy word. Everybody's talking about it. We know we have the, you know, that the SEC rule, for those of you that are working for a publicly traded company, you know, that you're going to be dealing with. But ultimately, you know, the takeaway here is ESG by itself. It's not a replacement for being compliant. You know, the government governance piece of that is really is complying with regulation.

1:11:44
And something that I always like to talk about is, you know, sometimes you can do these ESG or voluntary type programs at very minimal cost.

1:11:55
Sometimes you can balance operational excellence with enhanced environmental performance.

1:12:01
So, if you can show quantitatively that, you're not emitting as much, but at the same time, maybe keep something in your pipes more or operationally. Be more efficient.

1:12:14

Sometimes it can be even in terms of combustion, you know, on, on your engines.

1:12:19
You know, if you're able to make something more efficient and, you know, from a combustion side use less fuel, that's also good thing and it's going to save you money.

1:12:28
Something that we're dealing with a lot is this concept of R S G you know responsibly sourced gas sustainable green gas.

1:12:37
Know ESG with and a lot of these voluntary programs tend to be Shareholder or investor prevalent driven. They, you know, as we start dealing with even some of the export companies, you know, sending gas, for example, to Europe, especially in today's world. You're realizing that their expectation is that you've got sustainably sourced gas.

1:13:00
So if you can do things now to start showing that the way that you're producing, transporting, your gas is responsible and so-called green. That's going to. That's that's going to give you a lot of leverage later in terms of proving that. And if, maybe some of your, your dollars are actually tied up in that way.

1:13:23
So, one of the things that we see, a lot of folks moving to our voluntary ojai programs as a way to kind of start, you know, a lot of facilities. Yeah, you're required by regulation to complete ojai surveys.

1:13:37
In this case, you know, we're really, you know, there's a lot of things that you can do that with the Ojai camera, you know, pre acquisition risk assessment getting into health and safety reasons. General, major findings, largely subsurface leaks and but just leaks outside of the regulatory driven work.

1:13:57
So, like a fuel gas system at a gas plant, for example, may not be in an elder program, you can look at that using your camera, and you're also going to keep that gas and get pipes.

1:14:08
The one of the things that comes up a lot now, where we tend to have a lot of folks that are able to just get a camera come out, take a look at a facility, and they don't know what they're looking at.

1:14:18
Well, ultimately, we would expect those folks to also have to comply with Appendix K and the requirements in Appendix K. But, if they're looking at your facility and you might have a third party third party equipment at your facility. You know, historically you go up with a sniffer maybe, but it might be behind a fence.

1:14:37
Both If they're gonna see third party equipment at your facility, it's going to be expected that a chores. And so you can use the camera to just glance at it, make sure that there's nothing leaking. And if there is, you can contact that company and have them go ahead and assess that.

1:14:55
Next slide, please.

1:14:57
So, the thing that I'm going to end on is new technology.

1:15:01
Uh, we tend to always want new technology. It's a good thing in a lot of cases that makes us more efficient and really enhances our ability to detect leaks and do our jobs.

1:15:14
There are always strengths and weaknesses of every technology out there. So here we're talking about AGI and a lot of cases but you know there's a lot of continuous and drone sky based satellite imagery. You name it out there.

1:15:28
The idea, the message that I'd like to send to everybody is, sometimes one technology isn't the best, but the another one is a little bit better, but in a lot of cases, they can be complimentary to each other. So something that you can do as an example is have a continuous type sensors that would alarm somebody to go boots on the ground with AGI technology or be able to quantify a little bit better on site. Exact, find exactly what the lead source is, by using multiple technology, sometimes, is the right method.

1:16:01
But, don't purchase a technology or buy off Intuit technology until you've figured out what you need.

1:16:10
Is a regulatory driven, is it even allowed from a regulatory side? Is what's, what's the data? Is it is a public data, Is there information using one technology to another that you don't want out there?

1:16:23
You know, just assess all of those things, and make sure that the technology that you're investing in and putting your money into actually is going to be effective for your this facility, and not just trying to take you, get a technology out there, and just kinda make it work for your facility. But ultimately, that's, that's what I have, and I'll bring it back over to Jay.

1:16:49
Thanks, Dan.

1:16:52
Yes, If anybody has hasn't been thinking a lot about Appendix K so far, hopefully, this gives, gives people a lot of ideas about saying, Ooh, this might be a big deal, and a better, better react to it.

1:17:07
So, now, we're going to shift into questions and answers from the panel.

1:17:12
So, thanks, everybody, for paying attention. We've got a few questions already that we can put in front of people.

1:17:19

But I, again, want to encourage people to, even as we're wrapping up the day to day, to go ahead and put some questions out there that we can get our experts to be able to respond to.

1:17:30
So, I'll throw out a couple of them right now that are sitting in front of us. First one I got here, now probably paraphrasing some of these.

1:17:41
But, Dan, how much longer would in Ojai Survey take with the new Appendix K requirements, as opposed to what is kinda the norm right now?

1:17:53
So, so right now, you know, ultimately, you know, since we're going to be dealing with all of the dwell time and additional requirements just for collecting data, you know, we're estimating somewhere in the 3 to 4 times. Rage. You know, now, it's gonna vary a lot by facility, but, you know, that's kinda the expectation now.

1:18:14
So, 3 to 4 times as long to do the equivalent inspection of what might be going on today, in normal.

1:18:21
Exactly.

1:18:23
And that translates into dollars, ultimately, for, for a lot of the operators. Exactly.

1:18:29
Yeah, big, big, big, big time dollars, You know, you know, because when anytime that, and sometimes it can be especially on the production side, you know, when you're able to only able to get. A third of the number of facilities in the same day, sometimes you're mobilizing into an area from quite a distance so it really can can get expensive quick.

1:18:51
Great.

1:18:55
Jen, one of the somebody asked this at a broad level, but they were they were.

1:19:00
I think the primary focus was the fact that the proposal dates ARR.

1:19:07
The proposal they'd like in this case for the rule, which doesn't even have rule language yet, is the effective date on the rule.

1:19:13
And I know that this is kind of comment for NSPS rules, that are actually happening quarto uncluttered away and happens for a lot of other ones.

1:19:22
But I think the main question was: Why does EPA use that date?

1:19:29

Yeah, I mean, so I think the You know, they typically are allowed under the NSPS, to use the date from the date. They propose the rules.

1:19:38
And I think part of the reason is, because they put people on notice that if you build a facility, you should be anticipating, what's going to be happening. It doesn't mean that the rules are effective as of that date, because the rules may change. And so, it's always been a little bit above.

1:19:55
I'm a strange thing, because no operators are less trying to guess what is, what is going to happen.

1:20:03
But I think, ultimately, what EPA wants to do is give enough notice that like, hey, there's these facilities that are gonna be considered new or modified by the rule. And, you know, I think it also eliminates from their perspective, people going and making changes before the new rule becomes final, right? Because otherwise, that might happen, And then they lose some of that.

1:20:25
And, you know, I think I alluded to it, But there is still, I think, going to be some, some dialog and some question on the legitimacy of the November 15th date here, because of the fact that there was no rule language. And it makes it quite difficult for people to even understand what they might possibly have to do, even if that is a trigger date.

1:20:45
So, great, thank you.

1:20:52
I think this one, to go to Dan.

1:20:57
So, someone was asking if they, if they have currently been doing their own OGA surveys in-house using their own staff and people, this would be like an operator, I assume.

1:21:08
Does that mean that, that they would have to have at least one senior OGA operator on staff and employed by that company?

1:21:17
Or are there other ways to work through that kind of audit or QA process?

1:21:22
Sure. Good, good question.

1:21:24
So, basically, you know, the short answer to that is, you don't have to. It.

1:21:31
Probably would be the easiest in that situation to have somebody.

1:21:36
They're always readily available, but they're certainly, you know, folks, even, you know, like for hydro here. You know, we've got several OJ, senior ojai operators. But there's always going to be somebody out there that can, that can, that can help you and you certainly would be able to

contract that out to. Now. one thing to keep in mind is with the requirements there, you know, you're talking about, you know, right now quarterly performance audits, there's a lot there that you would be required to. There's a lot of time. So, you know, over time, it could become a pretty costly thing to do.

1:22:11
But there's certainly resources available for those people to, at least, you know, fill in interim: even if it's just an interim situation, where you don't have that senior OGA operator that, you know, somebody would be able to help.

1:22:29
I think that'll be helpful for people in their planning at least.

1:22:32
Uh, Jen, there, one of the questions was for some of the changes that are proposed and they're like for pneumatic controllers and things, are there still some of the same languages exist in the past work?

1:22:46
If you need to have natural gas for a safety reason or something like that, can you still justify those, or is it a blanket exemption, blanket requirement that you have to go to non emitting controllers?

1:22:58
Yep. Currently, as they've written up, the, the, you know, we don't have language again, but the drought concept. They do not have an out for safety, right, Which is kind of interesting because some of the programs, they've been looking at, like Colorado, do, have exemptions for safety and process. They, But they have made clear they don't think they they need to retain that.

1:23:20
I think that's gonna be really interesting on how that plays out with the ability to use, you know, because really, unless you are able to use the self contained routing to a process, you know, I know, for example.

1:23:35
There's, there's technology out there that will route the pneumatic back to, like, the heater treater pilot. I would consider that routing the process, although technically it might be to combustion, but, you know, somewhat, there might be then limitations on what all you can route to that. Peter Trader pilot.

1:23:52
And so, I think that, you know, unless they ultimately take the position, the only thing you can use this instrument air, I suspect they will need to include some safety exemptions and process exemptions, hopefully, in the final.

1:24:07
OK, thanks.

1:24:10
So another question, probably is a little bit directed at me, because I brought it up again. You might, I'll try answering this one first, but feel free to jump on it as well.

1:24:20

Someone asked if, if the, if the House and the Senate flip, might there be an opportunity that the Congressional Review Act, like it did earlier, for quite away, might come into play to eliminate the set of changes that we're talking about right now, when they go final.

1:24:40
And I'll start my first answer on that, and if you can, if you have any other thoughts, please add, but I ended up saying probably not, um, because more than likely, the president wouldn't sign off, at least on the Congressional review.

1:24:58
Resolutions, I don't know there's a formal paedo, but I think it wouldn't be signed.

1:25:02
That's why you typically see these Congressional Review Act.

1:25:04
Issues come up when there's been no a wholesale change of the House Senate, and the president from one party to another party.

1:25:12
And the other part that drives in the Congressional Review Act is that there's a technical detail on timing that that limits the Congressional Review Act, the things, the rules that were finalized in the last, I believe it's 60 congressional days, which is not a calendar day thing, at all.

1:25:32
So it's relatively recent actions, as well.

1:25:39
Next question, OK, So yeah, I think the bottom line on that is, don't look for that to happen, right? That would be what, we're basically. I think we're all going with that one.

1:25:54
What to do, Dan, this is more of a statement, I think, than it was a question, but, uh, the question or whatever it is is, I thought EPA wanted to encourage the use of the optical, yes, imaging is a cost effective change at the 21, but it seems those what you just described, that maybe that's not the case?

1:26:16
Yeah, yeah, good statement. Certainly not, certainly not the case in the proposed rule right now.

1:26:25
Yeah, I would hope that we get some clarification, because we do know the EPA, they want the new technology they reference. You know, ODI as best system of emission reductions, and a lot of cases.

1:26:37
And, you know, if they inhibit our ability and inhibit the benefits, that ojai you get, it gives us, you, know, ultimately, you know, nobody's going to use it as an alternative, for example. You know, some, some of us will be required to use it any way, based on, for example, quite a, B, or C, but, you know, in some of these met the 21 programs that they would prefer us likely to, switch over to in Ojai camera for, you know, it's probably not going to happen, so. Get really good observation. And, you know, ultimately, if we're talking a lot more time, lot, more cost.

1:27:13
No, we're not going to switch, we're just not going to see. See that transition.

1:27:20
I've got 1 other 1 here, Dan, that I think you might be able to respond to quickly, I think this is probably the last question we have time for right now. So how do you get weather data and things like that. Wind speeds and Stefan sites, especially, a lot of these sites are remote. There's no weather service location nearby, or anything like that.

1:27:38
Get really good question. So, you know, our standard work process is to carry a portable anemometer that it also it collects your wind speed. Your temperatures give, you know, gives you maximum averages, different things like that, that that started with quite away. Because the reality is you could be 5100 miles from the nearest, especially National Weather Service met station. Its sensors. Conditions can be so much different or even one, You know, the National Weather Service station might inhibit your ability to do this, the survey, but the conditions on site are good enough for you to do the survey, and we can collect that data that way.

1:28:18
Great. Said, I think that's all we've got time for. Amy, are you going to come on now and kinda close this out?

1:28:26
Yeah, thanks so much, Jay. We're reaching, obviously, the end of our time, what a great presentation from all of our speakers, and Jay, thanks for moderating, And, please be sure to fill out your, our exit survey and help us target and tailor these webinars better for you in the future. There's an opportunity and the survey to request some one-on-one time with our subject matter expertise that you can discuss your interests further. Also, a link to the recording of today's webinar will be sent to you via e-mail, and will be available on Try Hydro's website, after the webinar. Thank you so much for joining us today. Thank you to Montana Petroleum Association for the opportunity to present today. And, again, thank you to all of our speakers.

1:29:25
Bye, everybody.

1:29:27
Thank you.