LUCAS LUCERO: OK, hello and welcome to the BLM's Public Outreach meeting for the Proposed Revisions to the Oil and Gas Regulations. I'm Lucas Lucero, senior policy analyst at the BLM's headquarters, and I'm station in Phoenix, Arizona.

I'm serving as a moderator. And on behalf of the BLM, I want to thank you for joining us today. I'd like to start by having our presenters introduce themselves, starting with Beth, please.

- Hi. I'm Beth Poindexter, an engineer with the Production Measurement team, and located in Santa Fe. The other members of the team who will introduce themselves-- Chris DeVault.

- Yeah. I'm DeVault. I'm with the Production Measurement team as the senior oil and gas compliance specialist. And I'm located in Billings, Montana.

- Thanks, Chris. Next, we have Stormy Phillips.

- Hi. My name's Stormy Phillips. I'm an engineer with Production Measurement team, and I'm stationed in Tulsa, Oklahoma.

- Thanks, Stormy. Next, we have Amanda Eagle.

- Hi. I'm Amanda Eagle. I'm a petroleum engineer with the PMT, and I am stationed in Anchorage, Alaska.

- Thanks, Amanda. And last but not least, we have Casey Hodges.

- This is Casey Hodges, an engineer with the Petroleum Measurement team stationed in Granby, Colorado.

- Thanks, Casey. And now, I'll turn it back to Lucas.

- All right, thank you. Next, I would like to introduce Mr. Troy Frost, deputy assistant director for Energy Minerals and Realty [AUDIO OUT], who's going to provide some opening remarks. Troy.

LUCAS LUCERO: All right, thank you so much, Lucas. You know I appreciate it. And thanks to all the

presenters from BLM.

And I know they're excited about it. They're not only just presenting it, but, obviously, been very instrumental in working through these to the draft revisions and are excited about it. And this is a big effort for trying to reduce the bureaucracy, try to streamline things and make it easier for everyone, basically, both to administer as well as for the operators out there.

So we're excited about it. This is the second of three outreach sessions we're having. I think we got pretty good feedback out of the first one, but again, we're getting some good comments that we'll look forward to considering for incorporation [INAUDIBLE].

I really want to thank everyone like, Lucas was-- like Lucas said, for participating. We're really looking forward to the input that you provide today and over the next several days as this rule is still in-- is still a proposal and is still in draft form.

So again, thank you. And on behalf of BLM, welcome you. And again, it's a great opportunity, and thank you so much. And I'll be interested to listen again and hearing your feedback. So with that, Lucas, I'm going to turn it back to you.

- All right. Troy, thank you very much. We appreciate that.

I'll start with our disclaimer. "This presentation is not an official statement a policy of the BLM. This summary presentation was prepared for informational purposes only and does not in any way limit or modify the regulations described herein. Interested parties should not rely on the contents of this presentation and should take care to review the full, official text of the regulations at 43 CFR 3170, 3173, 3174. and 3175." Next slide, please.

As we get started, I'd like to remind our attendees to please be respectful. Any inappropriate questions or comments will not be tolerated. We are here today to address as many clarifying questions as possible in the time that we have allotted.

You can ask questions verbally or using the Q&A function, and we will address those at the end. Keep in mind you're welcome to add your questions at any time throughout the presentation in the Q&A box.

Attendee video is going to be turned off throughout the meeting, and we will turn the audio on when we call on individuals who have their hands raised.

Remarks or questions from the audience regarding the presentation do not constitute as comments for the purposes of the proposed rule. If you do wish to submit comments, those can be submitted by mail, personal delivery, or online. Next slide, please.

The proposed rule was published on September 10th in the Federal Register. And our 60-day public-comment period closes on November 9. The BLM also issued an media release on September 10. We are preparing transcripts of these public meetings, and those will be posted on the BLM web page for our Oil and Gas-Production Measurement team.

Regarding the regulatory history, BLM's prior guidance was captured in Onshore Orders 3, 4, and 5, which became effective in 1989. BLM published updated rules in November of 2016, which established 43 CFR 3170 through 3175. And those regulations became effective in January of 2017. In 2018, stakeholders and BLM personnel identified challenges with implementation of some of those 2016 rules, and so the BLM developed some revisions to those proposed-- or to those regulations. Next slide, please.

Regarding who may comment-- anyone can comment on the proposed rule. Again, the comment period will close on November 9. And comments need to be submitted by mail, personal delivery, or online.

We asked the comments be as specific as possible and reference to specific section or paragraph of the proposed rule. Confine your comments to issues pertinent to the proposed rule. Please explain the reason for any recommended changes, and include any supporting documentation. Also, we remind you that strong comments are supported with data, so we encourage you to include data with your comments if possible.

And a caveat-- BLM is not obligated to consider or include in the administrative record any comments that are received after the close of the comment period or delivered to an address other than those listed in the proposed rule. Next slide, please.

These are the addresses that are provided in the proposed rule to submit comments either by mail, personal delivery, or online. If you wish to submit comments online at regulations.gov, please remember to enter the correct regulatory identification number, which is listed at the bottom of the screen, which is 1004-AE59.

And a caveat-- before including your address, phone number, or other personal identifying information in your comment, be advised that your entire comment, including your personal information, may be made publicly available at any time. You can ask BLM in your comment to withhold from public review your personal information, but we cannot guarantee we will be able to do so. Next slide.

And now, I will pass it off to Beth, who will cover the proposed changes to 3170.

- Hello, everyone, and welcome. We're going to start with the 3170s, which include the definitions that apply to all subparts and some general information. And you'll find in this rule, there's a lot more specific requests for comments than there were in the 2016 proposed rule. And I'm going to start off with a special request for comment that was included by the assistant secretary.

"Should the BLM establish a Federal-interest threshold for applying its site security and oil- and gas-measurement regulations? What are the costs and benefits of setting a Federal-interest threshold? What would be an appropriate threshold? Would such a threshold jeopardize the Federal royalty interest and fail to satisfy the BLM's obligation under the Federal Oil and Gas Royalty Management Act, or FOGRMA, and to what extent? Could a similar threshold be adopted for applying the regulations to units and Communitization Agreements, CAs, producing trust minerals"? BLM specifically requests comment from state governments with federal and trust mineral oil and gas production that may be impacted by BLM regulation of mixed-ownership units and CAs." Next slide, please.

3170.30 is a new section-- Alternative Measurement Equipment and Procedures-- discusses the process operators or manufacturers may follow to get BLM approval for using alternative oil- or gas-measurement equipment or methods. And as a reminder, like variances, alternative measurement equipment and procedures must meet or exceed current regulation, or measurement performance

requirements, audit trail and verification requirements, as well as site-security requirements.

And just to note, that if an approval is granted under 30 for alternative measurement equipment and procedures, it's not the same as a variance in 40. And if we grant a variance, it's not the same as granting an approval under 30, Alternative Measurement Equipment and Procedures. Next slide, please.

Another very specific request for comment-- "Should the BLM include a state and tribal variance provision that would allow states and tribes to request that BLM apply analogous state or tribal rules or regulations in place of BLM requirements"? The idea here is analogous to the 2018 3179 Methane-Waste Prevention rule, where we defer to states for implementation.

What would be the appropriate standard for granting a state or tribal variance? What would be the scope of a state or tribal variance? What would be the appropriate process for obtaining a state or tribal variance? And how would the BLM address changes to state or tribal rules or regulations on which a variance is based? Next slide, please.

Now I'll start into 3173, which is Site Security and Production Handling. Next slide, please.

Also, I should mention before I get into this that you are welcome to submit question and answer-- sorry-- questions in our Q&A section. At the bottom of your screen, you're going to see a little-- looks like a chat bubble, and it says "Q&A." Throughout this presentation, you're welcome to submit questions to the panel, and we will take note of them. And start that whenever you'd like.

And the other thing I'd like to mention is regulations.gov is beta testing a website right now. I think they did that on purpose because they knew we had this rule out. So it can be a little frustrating trying to upload your comments, but if you try and fail, just wait a short time and go back, and you might have some success then. And we have no control over that.

OK, 3173.20 and 21 on Seals-- 3173.20 C2 to clarify seals are not required on valves on water tanks, unless the valve could provide access to sales or storage tanks with

common piping between the water tank and oil tank-- in other words, if the valve gets access to oil inventory. We also propose to eliminate the following seal requirements at LACTs and CMS-- on sample probes, LACT meters or CMS, manual sampling valves if equipped, valves on divert lines less than 1 inch in nominal diameter, and prover connections.

We propose to modify the following seal requirements-- meter assembly on mechanical meters only, as well as totalizers on mechanical meters, temperature averagers-- that's for standalone temperature averagers only-- and back-pressure valves-- ones that are fixed or not-automatic adjusting back-pressure valves that are downstream of the meter. Next slide, please.

We have another specific requests for comment with regard to seals. "Are the assumptions presented for the rationale underlying the proposed removal of six seal requirements on LACTs and CMSs appropriate and accurate"? We ask that you reference 3173.21(a), and we also suggest look for the-- in the preamble for the rationale.

Then on 3173.31, Water-Draining operations, we have proposed to eliminate record requirements for (a) through (h), and we're going to defer to seal-record requirements. The seal-record requirements are virtually the same as what was in (a) through (h). And we felt that was duplicative in nature, and have limited those.

And we have a proposed change-to-documentation requirement, but it does not negate an operator's obligation to report produced water on the OGOR-A. Operators are still obligated to report produced water on the OGOR-A. Next slide, please.

3173.50-- Site Facility Diagrams-- in this section, we've replaced the API number with a US Well number. And let me just say the number in an API number is the same number as a US Well number. The only thing that's changed there is the label of the number.

The API number is now called the "US Well number." It's assigned in the same way. It has the same sequence of numbers. Everything is the same except API sold the rights to the API number to PPDM, and it's now labeled as a US Well number.

Also, we ask that you identify co-located facilities with a box, and it removes the

requirement for a skeletal diagram of another operator's co-located facility. We've maintained the requirement for one diagram in the case of storage facilities common to co-located facilities and operated by one operator. We eliminate the requirement to wait to receive a Facility Measurement Point number prior to submitting new or amended diagrams. We propose to revise the timeframe to submit new, permanent facility diagrams from 30 to 60 days after the facility is operational or the facility is modified.

We eliminate the requirement to submit a modified facility diagram with a change of operator when the only change to the diagram would be the new operator's name. So if there haven't been any changes to the facility and the only change is the operator's name, there's no need to submit a new modified facility diagram. However, if the operator takes over and changes some equipment, there is a requirement to submit a modified facility diagram. Next slide, please.

When applying for a facility measurement point number, the concept is to apply for an FMP number as opposed to an FMP. And that's a change from the current rule.

The FMP exists whether or not BLM has an assigned-- has assigned an FMP number, meaning wherever you're reporting your volumes to honor on your OGOR, that's your FMP. Gas Storage Agreements would have FMP requirements when royalties are due.

We revise FMP number application deadline tiers. In the current rule, these tiers were created off of 2010 production data. And in the current role, we revise them using 2017 production data provided to us by honor.

So in the current role, with the one-year application deadline, it's greater than 10,000 Mcf per month or greater than 100 barrels per month. The application deadline is one year. In the proposed rule, it's been modified to greater-than 4,500 Mcf per month or greater than 500 barrels a month production. We'll have a one-year application deadline.

We're two years in the current rule, it's greater than 1,500 to less than 10,000 Mcf per month or greater than 10 and less than 100 barrels per month. And in the proposed rule, we have it greater than 1,000 and less than 4,500 Mcf per month or greater than 50 and less than 500 barrels per month. That would be the two-year

application deadline.

Under the current year, for a three-year application deadline, it's less than 1,500 Mcf per month or less than 10 barrels per month. And this is on an agreement basis. And in the proposed rule with the three-year application deadline, it's less than 1,000 Mcf per month or less than 50 barrels per month per agreement. Next slide.

3173.70-- conditions for commingling and allocation approval-- surface and downhole-- the BLM objective was to expand the ability to approve commingling of production while preserving measurement performance. And we've removed the requirement for the same revenue distribution on commingled agreements. That requirement was actually where the revenue from the royalty went within the federal government, and it's very difficult for the BLM to work that out, and I'm sure it's even harder for operators. So we've removed that requirement.

We've also removed the requirement for allocation method for produced water. Once again, an operator is responsible in upset conditions for the oil production. So I probably need to have records in order to keep up with that, but for the application purposes, an operator does not have to have an allocation method for produced water. Again, it doesn't negate the obligation to report produced water on the OGOR.

And we allow her proposed CAA to include lease; unit Participating Areas, or PAs, or Communitization Areas, CAs, to be included, as long as there is an approved APD at the time of the application. Provision allows for operators to apply for commingling prior to drilling wells. And that would be based on proposed production. Next slide, please.

OK, 3173.70-- again, commingling continued. this is the new addition to this section of the rule. We provide an overall allocation uncertainty analysis calculated by using the propagation-of-uncertainty method. This is a new condition for approving CAAs. You have to provide four criteria. The overall allocation uncertainty analysis must meet the performance goals stated in 3174 and/or 3175. And as a reminder, gas commingling applications are filed separately from oil commingling applications.

And then 2, analysis must show no allocation bias as a result of commingling allocation. 3, analysis must state the assumed underlying distribution of the

volumes generated in the analysis and support the use of the distribution assumption. And 4, the analysis is limited to four agreements for commingling approval. That item for only pertains to this new condition. It doesn't apply to the conditions that remain the same in the current rule. Next slide, please.

And we have a specific request for comment on the new commingling approval condition. Would the applicant be able to perform the required analysis? Would an applicant use this condition to apply for commingling and allocation approval? And is there a better condition or method for ensuring no risk to measurement of Federal or Indian trust mineral interest and approving commingling and allocation?

Again, if you've got a better method for doing this, we would love to hear it. And please submit data along with it. Next slide.

On the commingling applications, we've removed the requirement for submission of a SUPO. And in its place, an applicant can submit an applicant-certified statement stating if new surface disturbance is proposed, that it's compliant or pursuant to current regulation. And a certified statement as a sworn statement that the SUPO is prepared pursuant to regulation.

We have the same change with regard to right-of-way. So there's no need to submit the right-of-way grant. The operator may submit-- may simply submit a certified statement to the effect that the right-of-way has been granted pursuant to regulation.

It allows for agreements that are not yet producing to be included in CAA application. It requires an approved APD, offset well decline curve data, offset well oil gravity and/or gas Btu to support the projected production estimates in the application. And there's no need to wait for paying well determination prior to approving for commingling approval.

Let's just give an example on a PA. If an operator drills a well and has to wait six months to get a paying well determination, they can apply prior to drilling the well for commingling application, receive it. And then when the operator receives the paying well determination and the well is brought into the PA, then there's no longer a need for a commingling approval. Hope that makes sense. Next slide.

So 3173.72 on existing commingling and allocation approvals-- we're proposing to increase the threshold for grandfathered surface commingling to less than 6,000 per month-- 6,000 Mcf per month per agreement or less than 1,000 barrels per month per agreement. And we'd like to clarify that the grandfathering of the existing downhole commingling approval does not simultaneously grant new surface commingling approval. There seems to have been quite a bit of confusion about that in the current rule, and we've worked to clarify that in the proposed rule.

3173.190-- the immediate assessments for certain violations-- we've got a language change in the first violation, which now reads, an appropriate valve on an oil storage tank was not effectively sealed, as required by 3173.20 in the proposed rule. And we've eliminated the immediate assessment for the failure to seal an appropriate valve or a component on an oil-metering system as required in current 3173.3, which includes LACT and CMS components requiring seals.

And now, I think we're going to move to questions that we received on 3170 and 73. Next slide, please. When you registered, you had the opportunity to submit questions, and we've compiled those, and we're going to go through those now. And Casey Hodges is going to read the questions I think.

- OK. So as Beth said, these are questions that were submitted in the registration process. The questions that you guys have started submitting-- we do see them, and please keep submitting them. We'll go through those after we've gone through all the sections of the document here.

So the first question-- this is going to be for Lucas. "Will the proceedings be recorded digitally for later distribution for those who cannot attend"?

- Yeah. So a copy of The PowerPoint and the transcript of the meetings will be published on the BLM website in the same area where the PMT presentations have been posted.

- Thank you. All right, now the rest of it is in this section or for Beth. "Will there be a time for API numbers to be used with or instead of the US Well numbers. Some companies will need to add the US Well number to the accounting process and reports."

- OK. The API number and the US Well number are the same number. The process for assigning the US Well number is the same as it was with the API number. State regulatory authorities continue to assign the numbers in the process of drilling approval. An explanation of this change is found in the preamble on page 55495.

- Will corrected site-security diagrams need to be submitted to address the API to US Well number change.

- The site-facility diagram does not need to be updated to only change the label of API number to the label of US Well number.

- "Is there a proposed window of time for AFMSS 2 be up and able to accept FMP number applications"?

- The AFMSS 2 Development team is working to be able to accept FMP number applications when this rule becomes effective.

- "Clarify the MDS, Management Data System, is on site and does not grant BLM access to any company accounting process."

- If the operator elects to use an MDS as part of the process for OGOR reporting, it must be approved by the BLM. The only requirement is the use of an approved software. The definition of MDS is found in 3170.10, and it reads as follows-- "Measurement Data System, MDS, means a system that captures and stores source records from the flow computer at an FMP. The MDS is used by operators to validate, balance, and report volume and quality. An MDS does not include supervisory control and data-acquisition SCADA systems."

- "Does BLM realize the PMT tiers for applying for FMP means nearly all filings will be in the first year, greater than 150 Mcf per day and 16.5 barrels of oil per day"?

- The BLM used 2017 production data based on federal or Indian agreements from OGOR reporting and divided the production evenly into thirds based on agreement. Based on this, one-third of the FMPs will have an application deadline in one year, one-third a deadline in two years, and one-third a deadline in three years. The same method was used in the 2016 rule using 2010 production data.

- "Does the BLM think it is fair to invalidate all existing off-lease measurement and

commingling approval and use limited resources to review all such approvals in the local BLM offices"?

- At the time of the FMP application, the BLM will review existing off-lease measurement and commingling approvals.

- "If the BLM is to determine whether a facility is a gas-storage agreement measurement point or federal-- or I'm sorry-- facility measurement point based on native gas production, is it possible that the GSAMP can become an FMP, and then when storage gas exceeds the base gas or native gas, it will revert to a GSAMP"?

- Yes. If royalties are due on native gas, the meter must meet the requirements of an FMP. And a GSAMP can become an FMP.

- "If only certain wells within a storage area are on federal or Indian lands, would the GSAMP injection/withdrawl meters be considered GSAMP, and the specific wells would become FMP when withdrawing base gas or native gas"?

- Gas-storage agreements are established with contracts written by BLM state offices. There are currently approximately 35 gas-storage agreements regulated by the BLM. This part of the rule only applies to these federal locations. As gas-storage agreements, FMPs are only required when royalties are due on native gas.

- And then this is the last registration question, and then we'll move on to Chris DeVault. "What is the expected timeline for PMT to start accepting equipment hardware and software for approval"?

- OK, drumroll, please. BLM can accept applications for approval under the current regulation at this time. BLM will be able to accept applications for approval under the revised regulations once they become final. BLM plans to provide non-binding guidance-- for example, test procedures-- that will help to ensure that applications contain the information the PMT team needs to process applications expeditiously.

We note that this guidance may be considered quote, "guidance documents," end quote, subject to the requirements of the Executive Order 13891, Promoting the Rule of Law Through Improved Agency-Guidance Documents, published October 9, 2019. The Executive Order 13891 review process may delay issuance of the guidance.

And now, I think we'll hand it over to Chris DeVault to begin 3174 in the measurement of oil. Thank you.

- Yeah. And first off, we'll just continue to remind you that you can be asking questions through the Q&A at any time, and they will be read and answered at the end.

So first off, it's 3174.30, Incorporated By Reference, or IBR. It updates and reaffirms 16 IBR API standards to reflect the most current versions. The new IBR standards are API, MPMS chapter 7.1, 7.2, 7.4, and chapter 12.1.1.

The IBR standards that have been removed are API MPMS chapter 6, section 1; chapter 7; 7.3; 12, section 2, part 1; 13, section 1; and finally, chapter 18, section 2. Next slide, please.

3174.31 is the specific performance requirements. First off, for all FMP categories, there is no bias allowed, and they must all have the ability to be independently verified.

Very high volume is greater than or equal to 15,000 barrels per month and must be within the uncertainty of plus or minus 0.5%. High volume is greater than 1,500 barrels per month and less than 15,000 barrels per month, with an uncertainty requirement of plus or minus 1.5%. The low volume is equal to or less than 1,500 barrels per month and has no uncertainty requirement.

Then the BLM-approved equipment deadline for very high volume is within one year of the effective date of the role. And for both high volume and low volume, if in service prior to the effective date, it is exempted until equipment is replaced or production increases and puts it into a very high-volume category. If in service after the effective date, it must be in compliance within two years. Next slide, please.

This is the specific request for comment on these specific performance requirements. BLM is particularly interested in the views of states and other non-Federal leaseholders with significant oil and gas production who may have experience in implementing different thresholds based on their own assessment of risk tolerance and compliance costs. And the requests are-- the proposed

uncertainty levels in FMP category combinations reasonable or unreasonable? And please explain why.

What would be a better uncertainty level and FMP category combination to minimize risk of mismeasurement and compliance costs? And why? Next slide, please.

So 3174.41-- Approval of Measurement Equipment-- measurement equipment requiring BLM approval consists of-- and please note the red font are the new items in this proposed rule. The five that are in black existed in the 2016 rule.

And I'll just go through the list quickly-- automatic tank gauge, LACT sampling systems, positive displacement meters, Coriolis meters, Coriolis transmitters, stand-alone temperature-averaging devices, temperature transducers, pressure transducers, flow computer software versions, portable electronic thermometers, measurement data systems, and temporary measurement. Next slide, please.

3174.50 is grandfathering this new section. Data allows for the exemption from the approved-equipment requirement of 3174.41 for low- and high-volume FMPs in place or in service before the effective date of the rule. Please note this is based on the PMT experience with field-collected data and the limitations of testing not conducted in a controlled testing environment.

Next is provides exemption from the "approved equipment" requirement. And we'll still require that that equipment meets the performance requirements of 3174.31. If the location is modified after the effective date or the FMP moves into the very-high-volume category, the grandfathering will be rescinded.

And regardless of flow category, devices not covered by this subsection are the portable electronic thermometers, measurement data systems, temporary measurement. Devices unable to meet the requirements of the role-- for example, the automatic temperature and gravity compensators would not be grandfathered because they do not conform to the proposed rule. Next slide, please.

And the Grandfathering section requests for comments are-- what would be the overall impact for not allowing or allowing this grandfathering option? Are the thresholds for the proposed grandfathering set at appropriate levels? Is there a

better option or method for ensuring no risk to measurement of Federal or Indian trust mineral interest while allowing for the continued use of equipment currently in service? Finally, the BLM seeks comment on the assumption that not grandfathering automatic temperature compensators and gravity compensators will not result in significant costs to industry. Next slide, please.

3174.60-- Timeframes for Compliance-- as in 3175, the timeline for compliance for oil locations will be independent of the FMP application date. As you may be aware, a major issue with the current role was the connection to the compliance timeline of royal locations in service before January 17, 2017 to the FMP application date. The allowance under grandfathering should make it easier for the operator to comply with the timeframes. Next.

Since the equipment and service after January 17, 2017 should already be in compliance with the current role, there will be no phase-in period. Equipment in service before January 17, 2017 we'll have the following phase-in periods-- very high volume must be in compliance within one year of the effective date, then both high-volume and low-volume must comply two years after the effective date.

The operator can voluntarily submit a sundry notice for early adoption of the rule. And finally, on this slide is the equipment approvals will be required two years after the effective date. Next slide, please.

OK, 3174.80 through 88-- Oil Sales by Tank Gauging-- the Tank Gauging section was divided into these various paths to make the requirement easier to follow. And I'll just read through these five bullets real quick.

3174.86(a) clarifies the tanks under 5,000-barrel capacity only require a single midpoint temperature measurement. And this is both the open and closing gauges. There were some conflicts before, so this clarifies that. It removes the reference to API MPMS 18.2 and replaces it with specific language on the use of ATGs. 3174.8882 removes the specific requirement that the same tape plumb bob be used for open and closing gauges.

3174.88(b) provides specific allowance for an automatic tank gauging. And 88(b)(4) adds specific language for on-site requirements, such as an ATG verification log. Next slide, please.

It's 3174.100 through 108-- Oil Sales by LACT-- 3174.102 more clearly explains the sample system requirements. 104 explains the requirements for the non-resettable totalizer. 3174.105-- temperature-averaging device can be part of Electronic Liquid Measurement, or ELM. 3174.106-- transducer requirements are explained. 3174.108 allows for dynamic and automatic adjusting back-pressure bounds for changing flow conditions. And then it provides for other meters and devices to be approved by the BLM through the PMT.

Then 3174.110-- Coriolis Meter Operating Requirements-- it clarifies that a non-resettable totalizer can be displayed on an ELM, and the meter must generate the output. And it identifies the on-site and display requirements for Coriolis meters, whether they're used in LACT or CMS. Next slide, please.

We have specific requests for comments for this Coriolis meter-operating requirements. First off, how would a Coriolis meter be tested without a transmitter? Does the performance of a Coriolis meter change based on the type of transmitter installed? How would the BLM prevent the transmitter performance contributing to the meter uncertainty twice-- first, if a transmitter is required to test the Coriolis meter, and second, if a transmitter is tested separately?

And the final one for this is, is there data to support the position that a transmitter's contribution to meter uncertainty is insignificant, and therefore, will not change a Coriolis meter's uncertainty? If there is, please submit that data. Next slide, please.

3174.120-- Electronic Liquids Measurement, or ELMs, a new section-- BLM must approve the software associated with the calculation of volume. Furthermore, the proposed rule adds that [INAUDIBLE] the gas subsection will include requirements specific on the use of these ELM, which are display requirements; alarm logs; event logs; configuration logs, Quality-Transaction Records, or QTR; and the backup requirements.

3174.121 is the Measurement Data System, or MDS, another new section. It simply adopts the terminology, they industry terminology, of a measurement data system. And it clarifies the current term "Accounting System" is changed to MDS, and it applies to both 3174 and 3175. Next slide, please.

This is 3174.130(h)-- Truck-Mounted Coriolis Meters-- it adds specific language to address the Truck-Mounted Coriolis, or TMC, as a CMS. The additional TMC requirements include they must meet all requirements of a very high-volume FMP.

The meter factor used during the transfer must match the operating conditions of the fluid being transferred. The display requirements apply only during the transfer. Proving frequency is derived from the total volume from flowing through the meter. BLM inspectors must have the ability to witness the provings. All data must be accessible to the authorized officer upon request. And all lines must be connected before the seal on the sales valve is removed.

The TMC must comply with all audit requirements of 3173. And finally, any deviation from the CMS requirements on a TMC must be treated as an alternative method and be approved by the BLM through PMT. Next slide, please.

On to 3174.150 through 158-- Meter Proving Requirements-- without a clear industry practice for the termination of normal operating conditions, the BLM has proposed a prove-forward method; creates a path for the acceptance of a linear meter factor if proper data is submitted to the BLM for PMT approval; the requirement to prove a LACT at startup has been changed to allow for line fill; the prove must now be conducted in the first 15 days of first flow, and then the meter factor is retroactively applied to the previous flow; allows for better use of all proving runs from API MPMS for 4.8 Table A.1 rather than only allowing the five consecutive runs within the tolerance of 0.0005. And it allows for other proving methods to be submitted to the BLM for PMT review.

Next slide, please. And Meter Proving Requirements are continued. In 3174.152, the proving would determine the normal operating range for the LACT or CMS for that next period. The limits around the flow rate, temperature, pressure, and API gravity would define the range, for which another meter factor or prove would be required.

3174.154 allows for justification to be submitted for excessive meter-factor deviation. It allows for future methods of proving that are not dependent on pulse counts to be submitted to the BLM for PMT review.

3174.158 provides a detailed list of the specific data required and specifies a required calculation sequence to be followed in the meter-factor calculation. Finally,

it removes the requirement that proving reports be submitted within 14 days, and replaced with a requirement under 3174.158(c) that they must be available to the authorized officer upon request. Next slide, please.

3174.151-- Meter Prover-- specific request for comment-- The BLM seeks comments on other proving technologies or procedures that are not presented in this proposed rule but that meets its requirements. And it says in here, the data-- you must submit sufficient data to support that.

3174.152-- Meter-Proving Runs-- "Normal" point defined by conditions of the proving. Unit would have to maintain operation within 10% of the defined flow for flow rate and pressure, 10 degrees Fahrenheit of the temperature, and 5 degrees of the API gravity.

BLM seeks comments on these ranges and any supporting data that may show that the range should, without affecting the meter factor, be wider or narrower. Next slide, please.

And it's 3174.160 through 162-- Measurement Tickets-- These sections outline all required information on the uniquely numbered measurement ticket or volume statement. They may be in paper or electronic format and must be made available to the authorized officer upon request.

3174.161 clarifies the portions of the tank-gauging measurement ticked that are completed at the time of transfer-- before the truck leaves location-- and those that can be completed by the operator or contractor at completion of the ticket. Basically, all the information necessary to correctly net the run ticket must be on the ticket in the field, and then it can be simply correct correctly netted out in the office.

The specific reference to 3170.50(g) requires that the location information be on the run ticket. Adds that 3174.162(a)(11) requirement, for a LACT or CMS run ticket must now include the total net standard volume.

And finally, it adds the allowance for the volume statement generated by an ELM or QTR to be submitted in lieu of a measurement ticket. The specific requirements for this option are added into 3174.162(b) and must be raw, unedited data.

Last thing real quick-- there's not really a slide for, but I thought I'd mention, is under 3174.190, Immediate Assessments. The immediate assessment associated with the requirement to notify the authorized officer within 72 hours of a LACT failure has been removed. And the second one-- it clarifies the language associated with alternative methods of measurement under this section. And next slide, please.

And again, we're going to do those pre-submitted questions for this section of 3174. And Casey will read the questions.

- OK. "What kind of delay can we expect before the PMT approved list is available"?

- BLM anticipates the first approved equipment list will be available at the end of the timeframes listed in 3174.60 and 3175.60.

- 3174.43(a)-- "Will a sundry need to be sent in for FMPs already complying with the order"?

- We assume the question refers to 3174.43(a)(1), requiring a sundry notice for voluntary early compliance with 3174. Oil FMPs installed after January 17, 2017 should already be in compliance, and therefore, no sundry notice is required. For oil FMPs installed prior to January 17, 2017, a sundry notice will be required to early-adopt.

- "3174.60(b)(2) implies that these FMPs must meet the order in two years after the effective date. And per 3174.50 grandfathering, the equipment will not need to be approved by the PMT. Which rule applies-- grandfathering, or on the list"?

- 3174.50 has an exemption from the requirement to use approved equipment listed in 3174.418 through (i) at high- and low-volume FMPs. This exemption terminates in the event the equipment is replaced or the FMP moves into a very high-volume category.

Portable electronic thermometers, measurement data systems, and temporary measurement are not exempt from the approved equipment requirement. 3174.60-- timeframes for compliance always apply, except in the case where there's a 3174.50 exemption.

- "In regards to handwritten tickets, when that data is entered into the measurement data system, is the manually entered data considered to be original flow data, or is the handwritten ticket considered to be the original data"?

- The source document's the original document. If the source document is a handwritten take, the handwritten ticket is the original document.

- "Will the PMT have an approved list of measurement equipment and software, including all models, makes, and version posted on the date the rule is effective"?

- No. The enforcement of the approved-equipment lists will go into effect two years after the effective date of the final rule.

- 3174.156-- "Verification of the pressure transducer for liquid measurement is relatively much less important than verification of the temperature transducer. Considering the low pressure most measurement systems operate under and the lower compressibility of liquids, BLM should consider adding an exemption to this rule for systems where the pressure is less than 100 PSI-G."

- Now, the BLM welcomes data to support this statement. Standard industry practice uses the pressure of the system to correct for flow volume. This has a direct impact on royalty due. In order to change the proposed rule, please submit data to support the position. If warranted, BLM will evaluate the royalty impact of such a change.

- Regarding 3174.152(a) (1) through (4), 3174.152(h) (1) through (2), and 3174.153(f)-- "Is it intended that the full range of normal operating conditions that the meter must remain within between proving cycles can be expanded by proving at different conditions and applying the methods described in 3174.152(h)(1) and/or (2) to define a wider range for normal operating conditions if needed and supported by the last proving results"?

- Yes. That's the intent.

- Regarding 3174.152(c), "Is the intention of the reference to API MPMS chapter 4.8 Table A.1 to allow the tolerances, as stated in Table A.1, which correspond to different numbers of runs, to be applied instead of 0.0005, when the number of runs is more or less than 5, as described in the method shown in chapter 4.8 annex A"?

- The BLM recognizes that the API 4.8 standard provides a table for various runs and repeatability that meet a 0.027% uncertainty. Therefore, the proposed rule would incorporate that table into the regulation to allow greater proving flexibility while keeping the same performance standard for the proven.

- Regarding 3174.60(e) and 3174.41, "Is it intended that there be an exception during the two-year period described in 3174.60(e) that would allow the equipment listed in 3174.41 could be used prior to BLM approval? The proposed 3174.41 mentions an exception related to grandfathering and 3174.50, but makes no mention of an exception for 3174.60(e)."

- The items covered under 3174.50 are exempt from the requirements of 3174.60(e), Timeframes for Compliance.

- Regarding 3174.50(b), "Would equipment allowed under the grandfathering provisions that is only partially replaced-- for example, replacement of the internal mechanism of a PD meter-- no longer be exempt from the approval requirement in 3174.41, or would the entire metering unit need to be replaced to lose the grandfathering exemption"?

- Any in-kind repair is not considered a replacement.

- Regarding 3174.162(a)(4), "Are the opening and closing totalizer readings of the indicated volume that must appear on the measurement ticket intended to represent the values from the non-resettable totalizer in the meter"?

- Yes, that the intent.

- Regarding 3174.104(a) and 3174.110(d), "If the meter is a PD meter or a Coriolis meter in a a LACT system or a CMS, can the non-resettable totalizer value be generated by the flow computer using the pulses from the meter

In 3174.110(b), it states that, quote, a flow computer-generated totalizer does not comply with the requirements of this subpart, end quote. And it is not clear why this restriction would be necessary for a CMS but not for a LACT. A concern is that, in addition to receiving pulses, a flow computer and a CMS would also require digital communication to read the non-resettable inventory totalizer from a Coriolis meter

in order to display this value and included on the measurement ticket. But this restriction would apply only for CMS and not for LACT systems."

- The intent is that the requirement applies to both LACT and CMS. The preamble section for 3174.104 states the proposed rule would make it clear that the non-resettable totalizer display may just reside in an electronic flow computer. The non-resettable totalizer could display through the flow meter, but the output must be from the meter. We can see the concern with the regulatory text, and we'll amend the discrepancy to reflect the intent.

Regarding 3174.83(b)-- "Is the requirement to only follow the operation sequence in API MPMS chapter 18.1 for tank gauging intended to prohibit the use of Automatic Tank Gauging, ATG, which is described only in API MPMS chapter 18.2"?

- 3174.84 through 3174.88 gives provisions to allow for ATGs.

- Regarding 3174.105, "Can a Coriolis transmitter be approved to also function as an electronic temperature-averaging device if it meets all requirements of 3174.105"?

- Yes. This would require BLM equipment approval for this use.

- Regarding 3174.157, "Is it intended that the Density Meter Factor, DMF, should be determined and applied as described in API MPMS chapter 9.4, annex H, in cases where the verification of the density accuracy requires remediation"?

- Now, the BLM did not incorporate that standard by reference. Please submit comments if you feel this is a good approach, and why.

- Regarding 3174.120, "As long as it meets all the requirements stated for an ELM in 3174.120, does a Coriolis meter transmitter have to meet all other requirements in API MPMS chapter 21.2 to meet the requirement for an ELM for all CMS stated in 3174.120"?

- For a Coriolis transmitter to be approved as an ELM, it would only need to meet the requirements of 3174.120 and the performance requirements of 3174.31.

- Regarding 3174.30(b)(30), "Why is API MPMS chapter 14.3 on natural gas orifice metering reference to 3174.31, which appears to only be intended to address liquid-

volume measurement uncertainty"?

- In this section, API-- excuse me-- API chapter 14.3 is used to reference the root sum squared method only.

- Regarding 3174.31(a), "Is the methodology described in the newly published API technical report 2579 liquid-hydrocarbon uncertainty calculations also acceptable for calculating overall uncertainty"?

- The BLM has not yet reviewed the recently published API TR 2579 liquid-hydrocarbon uncertainty calculations.

- Regarding 3174.151(a), "Is the intended reference to API 4.5 subsection 6.5 meant to be Table 1 rather than Table 2"?

- Yeah. Great catch. Yes, this is an error and should be reference-- and should reference Table 1. Thank you.

- And last question for you here, Chris, in the registration questions-- regarding 3174.156, "What is the required accuracy for a pressure transducer"?

- Individual components do not have an accuracy requirement. It's a measurement-system performance requirement. Then the next slide, please, and on the Stormy with Measurement of Gas, 3175.

- All right. Thank you, Chris. And once again, I'll encourage everyone to please keep sending in those questions. We're trying to address them as we go along here with a lot of background conversations. So I'll just remind you there's that little box at the bottom that says "Q&A." You can click on that and type in a question at any time.

So I'm going to go over the changes that we're proposing for 3175. You'll notice this section didn't have quite so many changes as some of the other sections. But there was some key points, and I want to touch on those.

Starting with the specific performance requirements, after the 2016 rule, there was a lot of discussion about the impact that BTU variability should have versus flow rate. And during the rewrite process, we took into consideration the fact that BTU value and volumetric flow rate have the same impact on royalty. Because of that,

we thought it probably made the most sense to increase the uncertainty allowance on very high and high-volume FMPs on BTU or heating value uncertainty levels.

So we're proposing to change the very-high volume from 1% to 2% and the high volume from 2% to 3%. And with the way those are calculated, that's a pretty significant increase in the allowance for heating-value variability. But we are seeking specific comments on that. So you'll see in the preamble that we're asking if these changes to those proposed heating-value uncertainties make sense. Next slide, please.

For the equipment-approval requirements, just like you saw in the 3174, you'll notice the items here in black are the same from the previous rule. And then the items in red are new. They're kind of new. So here's what the differences are.

As the PMT, before they got assigned onto this rewrite project, was working on the test procedures for different items that needed to be approved in the 2016 rule. One of those items was linear meters for gas. And in attempting to write a test procedure for all linear meters, it was very difficult. Those meters vary to a great degree, and it's hard to write one test procedure that would make sense for all of those.

So instead, what we're proposing is to take the two most-- I won't say the most common, but the two that the BLM was most asked about, and specifically put those in the rule. And that was gas Coriolis meters and gas ultrasonic meters. And then all other linear meters would be included in the Alternative Measurement Methods category.

Next was, just like I said in the previous slides, we were looking into the effects of BTU value versus volume, and they have equal effects on the royalty. One of the things that we started noticing with this new focus in on the value of sampling is that a lot of gas-chromatograph software is homegrown. There doesn't seem to be such a unified software. So some of these softwares are just Excel spreadsheets.

What we've decided is that since we're reviewing the volumetric calculation that's going on in flow computer software, that we should also look at the BTU calculation that's going on in gas chromatograph software. So that's included as one of the softwares that would need to be reviewed and approved by the BLM-- again, not

revealing gas chromatographs or other parts of that, just that calculation method against a reference standard. And we'll talk a little bit about why we're doing that, too, a little bit later on.

Next was something that we'll talk about again a little bit later on, which is we stated that gas needed to be reported as dry, unless you actually measure the water-vapor content. And we gave some methods for doing that-- a chilled mirror or laser-detection device. And what we didn't anticipate, but what we have noticed in the field, is several laser-detection devices in use that were not designed for natural-gas application. And these devices are detecting any liquid vapor as water vapor and giving some erroneous readings.

The simplest fix for this, we decided, would be to include these in the list of equipment that needs to be approved. Again, this would only be verifying that that device was intended for use in natural gas and was detecting just water vapor.

Measurement data systems-- again, there's no real change here. We're just changing in the language. The use of the term "accounting system" had a lot of people concerned that somehow, the PMT was-- or the BLM was wanting to look into accounting systems and how companies were doing their accounting. And that was not really the intent. This is about record retention and calculation methodologies, and that was better encompassed with this term "measurement data systems," we felt. Next slide, please.

For the Grandfathering section, there was a Grandfathering section in the 2016 rule, and those allowances for older-style orifice meter runs and some older calculation methods stayed the same. What has been added is the same language that we saw in 3174, and that is around the allowance or base-- or more correctly stated, the "exception from the approved equipment requirement for equipment that is in place at the time that this rule becomes effective."

And again, I can't stress enough, this is an exception from the requirement to use approved equipment. It is not an exception from any of the other requirements of the rule. So you still would need to meet the performance requirements, the verifiability requirements, all of those things. It's just that piece of equipment wouldn't have to be on the BLM's approved equipment list.

Instead, for calculation, we would do like we do currently, with the older or orifice meter calculator, which is using the advertised performance from those different manufacturers of the devices. And we'll go onto the next slide here.

Timeframes for compliance-- now this is very different because 3175 was not tied to FMP applications like 3174 was. So actually, the phase-in periods for 3175 have all passed. So all locations, even those in service before January 17, 2017, now have to comply with the current 2016 3175 rule.

Because there's no requirements inside the proposed changes that are more stringent, we feel, than the requirements that are in the current 2016 rule, we didn't see the need for any phase-in period. So you won't see any phase in periods for most things. Now, there's three items that would have a phase-in period. The first is GARVS.

And to be honest, the development of GARVS has not even started, so rather than putting a timeline out there, we're proposing to say that GARVS would go into effect 60 days after the BLM releases the software. So once the software's out there, people can see how data has to be submitted. Then there would be a 60 days phase-in period before operators would need to start inputting within that system.

Next is approved equipment and approved software. And both of those would be the same, as you saw in 3174. They would go into effect two years after the effective date of the rule. Next slide, please.

Orifice meter tubes-- there's quite a few changes here relating to meter-tube inspection. So the idea of the basic meter-tube inspection was a wholly new concept in the 2016 rule, and we've learned a lot from the implementation of that. And one of the things that we learned is that the higher-volume FMPs, which we were inspecting more frequently because of their threat to royalty, also tend to have a higher velocity gas. And that higher velocity gas lends itself to not having as much buildup and things like that.

So because of that, it makes sense to extend out those periods. But we do realize that during startup, a lot of times, there's things that come in during startup that create issues that we have value in identifying.

So what we've seen is now there is an initial basic inspection frequency. So for very high, that would be within the first year. For high volume, that would be within two years. And then it would go into the routine basic inspection frequency that is five years for very high and high volume, and 10 years for low-volume FMPs-- very low volumes, just like in the 2016 rule, wouldn't require this inspection.

We've also tried to clean up some of the language that was creating confusion about when, exactly, a detailed meter-tube inspection would be required. Firstly, we understand that if you open up a tube during a basic meter-tube inspection, and you identify something-- let's say, like, filter paper being caught in a flow conditioner-- and you could go in there and you can remove that filter paper, there's really no value in requiring a detailed inspection because it wouldn't have any effect.

So we have now cleared out that language to say that if an obstruction can be removed and it has not caused any damage to the meter run, then it would not require a detailed inspection. So in my example, if you can go in, you can remove the filter paper, and it hasn't caused any damage, that wouldn't require a detailed meter-tube inspection. Now, if there was a rock in there, and the rock scarred up all the inside of the meter run, then you might-- then you would be required to do a detailed inspection.

The next thing was there was some language in there that stated in a low-volume basic meter-tube inspection, if you identified pitting that then you would be required to conduct a meter-tube cleaning. And the BLM recognizes that this was an error, and you can't clean out pitting, so we've removed that language.

Another thing that was causing a little bit of confusion is because of the way the language discussed the inspection-- the initial startup orifice plant-inspection frequency requiring you to check the plate every two weeks until the plate passed inspection, and then you go into your routine plate-inspection schedule-- some operators and some inspectors thought that that meant that at BLM representative would have to be out there on site and approve that before you could go to the routine. So we clarified the language in the rule that that is not the case. Once the operator identifies that the plate passes inspection, they can go to the routine frequency. And a BLM representative does not have to witness that.

And also, there was some discussion about when we say one month for routine plate inspection, what does that mean? And they related that to a very helpful table that appeared in the sampling section of the 2016 rule that stated exactly a maximum timeframe. And the BLM recognized that that's a pretty good idea.

So what we did is we took that table we moved it to the appendix at the very end, and then we applied that to all these different routine-inspection frequencies. So if a plate inspection says it's a monthly inspection, then the maximum time that you can have between those two inspections is 45 days, and et cetera, et cetera. And you could see that in the rule. Next slide, please.

For mechanical and electronic chart recorders, probably the biggest change that you're going to notice has to do with the verification schedule for high and very-high volume FMPs for flow-computer verification. After a lot of discussion with operators, with inspectors, and with flow-computer manufacturers, we've kind of come to the conclusion that, in many cases, increased human interaction with the flow computer has the ability to induce more uncertainty into the process than would be caused by drift with modern secondary devices because that made sense to us and we saw some data back some of that up.

And so what we're proposing to do is just go to a minimum requirement of every six-months verification. Now if an operator chose to do it more frequently, that's fine. But the rule would only require every six months across the board, except for very low volume, which would stay at annually. Next slide, please.

Now, we are we're seeking specific comment on this. Does this reduction create a threat? Or are we kind of underestimating that? Or does this make sense? So please feel free to comment on that topic. Next slide, please.

For logs and records, there was a big discussion. In 2016 in the proposed rule, the BLM stated that there was a certain number of significant digits that we needed to be able to perform our verifications, whether that be five significant digits or three significant digits. And a lot of the comments that we got back is that as digit shift around, a flow computer can't change those decimal places as it goes around. So it might be difficult to ensure that you always have the correct number of significant digits.

And that made good sense to us, and we said OK, well, the simple solution to that is just require a certain number of decimal places. But the unintended consequence of that is by requiring five decimal places for certain values, it increases the calculation that the flow computer needs to do to be double-precision math. And some very good, or well-in-compliance flow computers aren't able to handle that kind of calculation.

And again, that's not the intent. We don't need that level of precision. What we need is the correct number of significant digits so that we can perform our independent verification.

So we're proposing to go back to significant digits, but we are seeking comment specifically on this issue. Does this make sense? Or is it just unworkable unless we do the decimal places? Next slide, please.

For gas sampling and analysis, there's a couple of things here that we're trying to clear up. One is that equivalent methods of sample bottle cleaning. So we stated in the 2016 rule that an operator could use an equivalent cleaning method besides what's in GPA if they follow the GPA recommendations at the end. We're clarifying that that equivalent method would need to be reviewed and approved by the BLM, and this is just because some methods we're seeing don't follow any of those guidelines. And so it's very difficult for inspectors to know if a sampling process that is correct without some kind of review of those alternative processes.

Next is you'll notice in the preamble there's a very large section discussing some changes in when a gas-sample analysis would require an upgrade to be a C9 plus analysis. So when are we going to need that more detailed analysis? Initially, in the 2016 rule, that was set at 0.5% mole. We received a huge amount of data, and we really appreciate that. And we've noticed that we really don't see a trend in the bias until we get around 1% mole, at least from this fairly large data set that we got. Taking that into account, we are proposing to move to a 1% mole when we would require that shift to a C9 plus.

Now, we're going to ask for specific comments on this, but we believe, at least from the data that we received, by making this move, it would greatly, greatly reduce the amount of C9 plus analysis that would need to be conducted out in the field.

Next is we're removing the normalized mole percent of each component from the reporting requirement. The BLM uses some of the data for the total a normalized mole percent to verify the correctness of that gas analysis, but we don't really need each component or that level of detail. So we're replacing that with just a total normalized mole percent instead of that component level.

And then lastly, there's a small change to the sampling frequency, though a pretty significant one. And that is there is no longer, in very high-volume FMPs, there's no longer the possibility that the BLM would require an online gas chromatograph. So even if you have a highly variable BTU value at that FMP, and you cannot get it no matter how frequently you sample within that plus or minus 2% uncertainty, we would still never require more than biweekly sampling. Next slide, please.

For online gas chromatographs specifically, the BLM is seeking comments about this. We would like to know more about industry standards for selection, and installation, and practice in using online gas chromatographs. Next for components to analyze, again, we talked about that-- the amount of data that we received, about where that mole percent should be to trigger a C9 plus analysis. And we would like specific comments about if this change makes sense or if there's other data available that shows it should be somewhere different.

Lastly, you'll notice that there's been several sections removed from the 2016 rule, and those are the sections that talked about the testing of pressure temperature and differential pressure-measurement devices and flow-computer software. Now, the reason we're removing those is because, by having specifically written out steps on how the testing should be conducted, when something like the new API standard on the testing of pressure, temperature, differential-pressure measurement devices came out, that testing could show what the BLM needs to see, which is that the device would comply with the performance requirements of the rule. But because the testing is specifically written-- because the current 2016 rule has specifically written out testing standards that vary from that API standard, that would create an issue or we would need a regulatory change to be able to accept this other testing method.

We feel that that's being way too prescriptive. The performance requirements are in

the rule. So the specific testing, we are proposing to move out to the BLM website so that can be updated and changed and not-- and allowed for these other methods, like the API standards. And Beth talked a little bit about that in some of her questions. But that's the idea and the concept behind that. Next slide, please.

For reporting of heating value-- first, we want to clarify that if you are not reporting a dry heating value, the proposed rule says that you need to report what that water-vapor content is so that the independent verification can be conducted.

Next is this same deal that I mentioned about the addition. We're proposing to add an approval requirement for water-vapor-detection devices because of this issue that we've run it into the field with people using incorrect devices.

The next is we're proposing a change to the language that specifically states that you are allowed to use a C9 plus analysis if you so choose. There was some confusion in the current 2016 rule that there was actually a requirement to do a C6 plus analysis because that's what it stated in the rule. And therefore, if an operator chose to do the more detailed analysis, it would be allowed. And that was definitely not the intent, so we want to clarify that.

Next, we had a lot of people reach out and say that there were issues with contracts that wouldn't specifically allow for a 60-30-10 split, even though it's accomplishing the same goal. The BLM understands that, so we're proposing to change that specific 60-30-10 split with a BTU threshold, for both C6 and C9 plus. So we welcome comments on that, but the concept there is to allow a little bit more flexibility in that reporting.

Next slide, please. I think we backed up one. Yeah, one more slide, please. OK.

I won't spend a lot of time on this next section because it doesn't affect very many people, but there's a new section about gas storage agreement measurement points. There was some confusion when the 2016 rule came out about, should the FMP requirements of 3175 apply to gas-storage agreements? We're proposing to clarify that by making some specific requirements for those meters that are only recording injection and withdraw fees. And so there's been some-- this new section, and there's a big preamble section about how we came up with this concept. But since it affects so few people, I'm not going to spend a lot of time on it. And so we

welcome comments about those Federal gas storage agreement measurement points.

And lastly, we've removed a few immediate assessments. And both of those immediate assessments relate to mechanical chart recorders. And we removed those because while you still can get inked for violations relating to that, since there's actually no volumetric performance-uncertainty-requirement associated with those low and very-low volume meters where you can use a mechanical chart recorder, we didn't feel it necessarily met the threshold to require an immediate assessment for those violations.

So that's the end of this part of the presentation. And we'll go to those few pre-submitted questions relating to 3175.

- Stormy, the first question is, equipment/software PMT approvals-- "Why require PMT approval if the equipment can meet or exceed the standards published in API, GPA, et cetera? As long as the equipment meets the BLM uncertainty 3174.31(a), the PMT approval should not be needed."

- We appreciate the question there. The performance requirements are BLM requirements and not API or GPA requirements. The BLM equipment or software approval is the verification that that equipment meets its published specifications.

- "Is there a proposed window of time for GARVS to be up and running? And is there any discussion about a common reporting format"?

- At this point, the BLM does not have an estimated date for GARVS.

- In regards to 3175.92, "The 2 MCF per day and 2% requirement to trigger rereporting-- does this mean the adjustment is averaged out to 2 MCF per day, even if the adjustment only touches one day in that month? And likewise, the 2%-- is that talking about a 2% adjustment for the entire month"?

- I think there's a little bit of confusion here. These requirements are based on your OGAR reporting, so not the daily QTRs.

- "Is the Tables timeframe referring to sample dates or effective dates if the dates are different"?

- We appreciate this question, and we hope that you submit a comment on this. We recognize that there's a point of confusion as to the rule stating there's the date of the sample and the date of the analysis. The intent is that the timeframe would be between samples. But we want to make clear that the effective date has no bearing on this.

- "At times, we will have samples with analyses that are much different than historical. These samples will be rejected. If a sample is rejected, well that meter still needs to be sampled within the 45-day period, a monthly sample"?

- OK. If another sample can be taken and analyzed within that 45-day period, no additional action would be needed. But if there's a missed sample or a gap that's created, the operator should work with that AO on how to resolve that gap.

- 3175.12(c)(4) and 3175.113(d)(1)-- "Discussion of changes talks about membrane-tipped probes and sample separators. 3175.113(d)(1) lists some contaminants that can be found in the production gas, specifically hydrocarbon droplets and water. Much of the gas coming from the wells is at or below the Hydrocarbon Dew Point, HDP. This would mean many of these wells have multi-phase flow streams.

I am gathering data to show the concentrations HDP and pressure at the sample point. The use of membrane-tipped probes would increase the accuracy and repeatability of sampling a multi-phase stream by keeping liquid out of the sample bottles and GCs. This could also be a safety issue if you get too much liquid in a sample bottle and then heat it. A provider has submitted data on the benefits of membrane-tipped probes."

- And the PMT welcomes comments with data on this issue.

- "Location of sample probes seem to conflict with location of temperature thermal well in 3174.105 versus 3175.112(b). API 14.1 section 7.4.2 and API 14.2, part 2, section 6.5. Please confirm location and order of sample probe and thermal wells."

- OK, I think there's some confusion here because this question references both the oil rule of 3174 and the gas rule of 3175. If the question is just referring to gas sampling, the recommendations of 14.1 and 14.32 only state minimum and

maximum distance requirements. And as the thermal well and sample probe ranges fall within those minimum and maximum requirements, we don't understand why there would be a comment-- or a conflict. Please provide more information if you're on the call, or add that into a comment.

- "For FMPs measuring production from wells first coming into production or from existing wells that have been refractured, including FMPs already measuring production from one or more other wells, the operator must inspect the orifice plate upon installation and then every two weeks thereafter. In some instances, where the FMP is at the end of a large gathering system for a large unitized area, an ongoing development is adding new wells or refracs virtually constantly. The two-week period may create an unnecessary burden if it is interpreted that each new well or refract resets the clock. BLM should consider adding clarification to the rule regarding such situations."

- In situations that are specific to a particular location, the operator should seek a variance under 3170.60. This option allows operators to work with the local field office for field-specific issues with rule compliance.

- "Thermometer wells must be located in such a way that they can sense the same flowing gas temperature that exists at the orifice plate. The operator may accomplish this by physically locating the thermometer well or wells in the same ambient temperature conditions as the primary device, such as in a heated meter house, or by installing insulation and/or heat tracing along the entire meter run. When neither of these options is practical for various reasons, BLM should allow the installation to stand as is, as long as the possible error introduced is within the performance standards for the FMP."

- So the rule requirements around thermal-well placement come directly from industry-standard practice that has been in place since the 1970s. The BLM would need additional information to overturn such a longstanding industry practice, with lots of data.

- "3175.80(p)(1) requires horizontal meter tubes to have their sample probes located vertically at the top of a straight run pipe in accordance with API 14.1, 3175.80(o), lists several requirements for thermal wells, but does not require a

similar vertical installation requirement. BLM should clarify that there are no industry standards that prohibit such an installation where the taps after the sample probe are offset by some degree relative to the sample probe, similar to API MPMS 14.3.2, not specifically prohibiting vertical meter tubes."

- So the sample-probe requirements come from the API recommendations. There's no such recommendation for temperature probes. So if you believe that the orientation of the temperature probe should be prescriptive in the regulation, please provide data to support that, and request that change. If not, then I would say the rule doesn't state that.

- 3175.80(a)-- "The new rule language under this section may require operators to demonstrate compliance with the fluid-condition requirements under the proposed 3175(a), specifically for a single-phase flow requirement. BLM should clarify how it expects operators to accomplish this."

- So there's no change in the current rule on this requirement. The proposed rule only moved this requirement from the table in 3175.80 into the regulatory text. All referenced API standards are developed for the use of meters in single-phase flow. And regulatory language reflects those API standards. Multi-phase flow is not covered in this rule or permitted at FMPs.

- "3175.80(o)(2) gives operators to use insulation or heat tracing to comply and requires the entire meter run to be insulated or heat trace. This requirement to insulate or heat trace should only apply to the section between the orifice plate and 12 inches downstream of the subject thermal wells."

- OK so the meter run defined in the rule is defined as the measurement area established from API MPMS 14.32. The area of piping that's downstream of that area is not affected by these requirements.

- 3175.92-- "Verification and Calibration of Mechanical Recorders, E1-- for verifications performed after installation or following repair, the operator must notify the AO at least one business day before conducting the verifications. Is this intended to address the next scheduled verification subsequent to initial installation or repair or the verification performed during the initial installation or repair"?

- OK, so 3175.92.(e)(1) of the rule applies to notification of the installation or following repair. For subsequent verifications, the operator must notify within 72 hours before the verification. The BLM will work to make the intent of this section clear. We understand it's a little bit confusing.

- 3175.92-- "Verification and Calibration of Mechanical Recorders, F, Volume Correction-- At the normal operating points tested result in a flow-rate error greater than 2% and 2 Mcf per day, the volumes reported on the OGAR and on royalty reports submitted to honor must be corrected beginning with the date that the inaccuracy occurred. And if an error does not meet both conditions-- 2% and greater-than 2 MCF per day-- is volume correction still allowable"?

- OK, the minimum requirement of the rule states that an error of 2% and 2 Mcf a day, on a monthly basis, the operator must edit the OGOR report. Any operator may elect to edit the OGARs based on lower thresholds-- for example, lower than 2% or less than 2 Mcf a day. The rule is just establishing that minimum standard.

- 3175.100-- Electronic Gas Measurement, Secondary and Tertiary Devices-- "Table 1 changes the frequency of routine verification for high and very-high volume FMPs to every six months. BLM seeks comments on this change." Here's the comment. "An operator intends to continue to verify transmitters at the same frequency as plate inspections."

- So again, the rule establishes the minimum requirements. Operators may exceed the minimum standards in their day-to-day operation without the BLM taking exception.

- "The next two questions here, Stormy, are similar, so I'm going to go ahead and read them both, and you can just get an answer. What is the purpose of the volume statement? How does the statement contribute to ensuring accurate measurement of royalty quantities? Normally, measurement tickets are the official documents of record for royalty quantities. Consequently, volumes statements are not currently used. It appears the added creation and retention of volume statements is redundant and unnecessary."

And then the second question is basically the same question, but with regards to QTRs. "What is the purpose of the Quantity Transaction Record? How do QTRs

contribute to ensuring accurate measurement of royalty quantities"? Again, the commenter finds the retention of these redundant and unnecessary.

- Yeah. And I'll clarify this a little because we've got some additional questions about this yesterday. I think that this is a language issue. So first off, as stated in the rule, the operator can use measurement tickets or volume statements. So if you're using an ELM EGM, the rule reads this is an "or" statement and not an "and" statement. So this might just be a language problem.

So many people refer to measurement tickets as the actual physical written-out ticket and volume statements as being outputs from flow computers, and so we're trying to encompass both of those things. But if you look at the actual requirements for a volume statement, it's basically the same as a measurement ticket. And the idea there is that we're just making sure we get all the same information.

- All right. Thank you, Stormy. With that, that concludes all of the pre-submitted questions. At this point, we're going to move on to the questions that have been submitted during this session. I'd like to remind you if you still have questions, please go ahead and submit them. You can also raise your hand, and we can call on you. If at any point I'm reading the question or one of the presenters is answering your question and you want to expand on your question or clarify something, please raise your hand, and we'll go ahead and call on you and get that handled while we're talking about it.

So the first question comes from Justin Richardson. In the preamble in 3170.10, quote, "An FMP includes all measurement points relevant to determining the allocation of production to Federal or Indian leases, unit PAs, or CAs," unquote. Also in the preamble, 3173.10 and 3173.112, quote, "Under the plain terms of the proposed definition, a measurement point affecting royalty, or injection, or withdrawal fees would be an FMP, even in the absence of BLM approval," end quote.

"Can the BLM provide clarification? Are allocation meters, non-royalty bearing, now subject to the proposed rule? Would these meters then need PMT approval and need to meet the FMP uncertainty requirements? How does this rule work in reference to honor on allocation and production"?

And Justin, I think we need some clarification, so if you could raise your hand, and

we could get you to unmute, and then we could talk to you directly on this.

- Beth, go ahead and start answering.

- So Justin, allocation meters are not FMPs, but an FMP that measures total production in approved commingling agreement will be used to allocate production back to individual agreements in the commingling approval. So I think that's the distinction we're trying to make in the first preamble quote.

And allocation meters do not need to meet-- do not need to have PMT approval. But in the new condition on commingling, an operator will have to show that there's no bias or risk to federal measurement in a commingling application.

And again, I'm going to need some help. If you want to raise your hand on the last question, how does this rule work in reference to honor on allocation of production-- I'm not entirely sure what you--

- So Beth, unfortunately, Justin left the call.

- OK.

- I think. I don't see him. Oh, he is back on the list. So Justin, if you're there, can you raise your hand and maybe provide us some more? Justin Richardson, maybe provide some more clarification. I'll give you a couple seconds here.

All right, well, Justin, if you do get on, we can get back to you. We'll go ahead and move on to the next question.

Next question comes from Laurie Bingham. "In what format must the requests for BLM approval of equipment be submitted? Is it sundry"?

- No. We're going to have an application process directly to the PMT with regard to equipment approvals. And we're anticipating that most of those applications will come from measurement equipment manufacturers and not from operators.

- OK. Laurie raised her hand. So when we call on you, Laurie, please click the Mute button in the bottom left-hand corner, and then we'll be able to talk. There you go.

LAURIE: Sorry. And to add to that question, so once it's posted on-- the equipment is posted

on the PMT website, then nothing further needs to be done?

- Once the PMT reviews the data and creates a condition of approval for use for the piece of equipment that will be posted on the website. And operators nationwide can use the equipment, yes.

LAURIE: Perfect. OK, thank you.

- Mm-hmm. And hi, Laurie.

LAURIE: Hi, Beth.

- Thank you, Laurie.

All right, the next question comes from Paul Furman. "I see a lot of specificity"-- I like the use of the word "specificity," Paul-- "in what standards in API will apply to the new written rules? API standards have always been recognized as the gold standard, whether building company internal standards for measurement or in specifying how hydrocarbons will be measured for a sales contract. Can the PMT comment on why it did not select standards as a whole standard instead of its current method of chapter/section/part which apply"?

- Sure. Paul, that's a great question. And we also agree that API has some wonderful standards that are gold standards. The BLM, however, is a regulatory agency, and we have to have rules that can be enforced. And many of the API standards are written using the term "should." And any "should" statement in a standard is not enforceable by the BLM, so the BLM selected chapter, sections, or parts that can be enforced. I hope that answers your question.

- Excellent. Thank you, Beth. That is all of the 3170.73 questions. We're going to move on to 3174 questions for Chris DeVault to answer. The first question in this section comes from Sally Goodson.

"Why has API MPMS chapter 6.1 LACT systems been removed from the references? When LACT units were added as a measurement system, what requirements will be used to build LACT systems if chapter 6.1 is removed"?

- Yeah. Listing specific items rather than referencing an entire document focuses

inspection enforcement efforts and makes the rule easier to understand for everyone.

- OK. The next question comes from Hillary Gleats. "In the preamble for CFR 3174 under Standards Incorporated by Reference, the BLM proposes to remove chapter 18.2 because it is confusing as to what methods and processes are automatically approved without PMT review, and then states that the BLM recommends the use of 18.2 as guidance when considering an alternative method for PMT review.

Since 18.2 is not specific to the use of ATGs, but rather, covers all types of quality and quantity determination when measuring the volume of oil removed from a production facility, and specifically states that authorities having jurisdiction should be consulted before selecting a methodology or process, and, in addition, provides a detailed uncertainty-example calculation for guidance, can you explain why the inclusion of 18.2 in CFR 3174 would not actually FMP enhance the process of applying for approval of alternate methodologies from the PMT"?

- Yeah. Excellent point. Chapter 18.2 would be a great resource for applying for approval of alternative methodologies. However, an API standard does not need to be incorporated by reference for this purpose. The operator could include API 18.2 to make their case for an alternative method, and the BLM would take that into consideration.

The rule has added specific language that we believe would be enforcable to address automatic tank gauges and track [INAUDIBLE] Coriolis meters. These would be approved forms of measurement in the proposed rule. API 18.2 does not assist in the enforcement of ATG or track [INAUDIBLE] Coriolis measurement. Please provide comment as to how BLM could provide better oversight with the inclusion of chapter 18.2.

- Thank you. The next question comes from Sally Goodson. "Why is API chapter 4.9.4, determination of the volume of displacement [INAUDIBLE] by the gravimetric method of calibration, not included in the references"?

- Yeah this method was not included in the current or proposed rules, but there is an allowance for other methods of proving to be approved at a later time. So this standard could be included by that method. Or if there is value in having this

directly to the rule, please comment on why it should be included in the BLM. We'll review, and consider the edition.

- The next question comes from Jason Rigg. "Does the measurement data system fall into the two-year category for equipment approval"?

- Yes.

- Excellent. Thank you, Chris. That's all of the questions on 3174 that we've received so far. Again, if you still have questions, we're going to go through some 3175 questions, but go ahead and get those questions in. And we will get to those as we can.

All right, so the next ones are for Stormy on 3175. The first question comes from Jody Bertini.

"Per order 3175.ADP, the sample brought must be the first obstruction and at least 5 inside diameters downstream of the primary device." This is a multipart question here.

"1, how will order 3175.ADP work for ultrasonic meters since, per 3175.ADP, the sample probe has to be the first obstruction, but at least 5 diameters from the primary device. And per AGA 9, section 5.2.5, the temperature thermal well must be from 2 diameters to 5 diameters. Thus, it has to be first."

"2, how does BLM define 'first obstruction?' 3, Does this conflict with API 14.1, subsection 7.4.2, which states sample probes should be at least 5 diameters downstream of disturbing element? And 4, a general statement that there is a typo in 3175 ADP1. Reference should be to API 14.1, subsection 7.4.2 and not 6.4.2."

- Yeah. So there's a lot of parts there, but I think we can answer pretty quickly. So the first thing is the requirements of 3175.80 apply only to flange-tapped orifice meter runs. So ultrasonic meters would have completely different requirements independent from those.

Also, in reference to the subsection of 14.1, there is no subsection 7.4.2 and 14.1. The seventh edition, the one that we've incorporated by reference, I think that the question asker might be looking at the sixth edition of the API standard-- so not a

big deal, but it's just a little bit of change in the numbering.

As far as what the first obstruction is, again, the first obstruction, as it's defined in reference to orifice meter tubes, you know, is kind of discussed in 14.32, and it has to do with the inside pipe diameter. But that doesn't necessarily mean that that would be the same language for an ultrasonic meter once that was approved. And I think he's got his hand raised here, so if he's got anything to add there--

JODY: Yeah, Stormy. The clarification we're trying to get is, can the sample probe be located 5 pipe diameters downstream of a thermal well, for instance. Per the reference-- or per the description of water primary device is in 3175, it includes both the upstream and downstream piping, as well as the differential device, the orifice fitting.

- Yeah. So again, we would address that because ultrasonics-- there's a lot of different requirements there, and we would look at that specifically. But I believe that in that situation, just kind of shooting from the hip there, that the requirement for the sample probe to be 5 diameters out is related to the aerosol created from the orifice plate itself in that restriction.

And since there isn't a similar restriction in an ultrasonic meter run, I think the distance from the primary element is probably a lot more flexible. So there's definitely a possibility that you would still have a sample probe that could be closer than 5 diameters, but it would still be in front of the temperature probe for the same kind of reasons that we don't want to pick up aerosols that might collect at the bottom of the thermal well. Again, that would be specific to when we do those approvals for those ultrasonics, but that would be my initial thinking. But we'd welcome data to look at that in any way.

Jody, I think I understand your question. The problem is that the primary device for an orifice plate is defined as the upstream and downstream meter runs and the orifice plate. Is that correct?

JODY: That's correct, yeah.

- I'm sorry here. I think, to keep--

JODY: 30--

- Go ahead, Jody.

JODY: I was going to say 3175 ADP specifies downstream of the primary device.

- And again, I think the key here is the fact that 3175 ADP applies to orifice meter runs, so that would not be enforceable on an ultrasonic meter run. It would be incorporated in a different way.

[INTERPOSING VOICES]

JODY: Stormy, we're trying to get clarification on an orifice meter run as well.

- Right. So I think, Jody, the best thing to do-- because I see where the discrepancy you're stating is-- please submit a comment on that because I understand you're saying now, we might have to put the sample profile 5 diameters downstream of the downstream meter run. And I understand that conflict. So in order for us to address it, which I think we probably will need to, make sure you submit a comment on that, and we will certainly look at that wording.

JODY: Sure. All right, thank you.

- I would also ask that you submit wording and drawings, please.

JODY: Yes. Yes, we can do that. Thank you.

- Perfect. Thank you.

- OK. The next question comes from Justin Richardson. "When referencing chromatograph-software approval, is the BLM speaking of the reporting software, or the GC integration software, or both"?

- So the only part of the software that would be reviewed for approval is the software used for BTU calculations. So this would be done by-- in the same way that we've discussed doing it for flow-computer calculations. It would be done by a comparison from that software's calculation of BTU value against a reference standard within a set tolerance. And then it would basically be a pass-fail test because it wouldn't be attributed any kind of uncertainty performance. It's just,

does it calculate within that same tolerance?

- All right. That is all of the questions, I believe, that have been submitted. Amanda, please let me know if we have received any other questions. But I believe we've covered them all.

AMANDA EAGLE: We have not, so if anybody has one, feel free to raise your hand, or submit it, or raise your hand while you're typing, whatever you want to do.

- Yes, if you're typing one in, go and raise your hand so that we know that you're typing something in. Or if you want to verbally ask a question, please raise your hand, and we will call on you. We'll give people about 15 or 20 seconds here to go ahead and raise their hand or submit any other questions.

All right, Murat Semis has raised his hand. Let's go ahead and call on him. And Marat, when you get called on, hit your Mute button, please. Thank you.

SPEAKER: Hi, Casey. Can you hear me?

- Yes, we can.

SPEAKER: I thought the distance from the orifice plate to the first obstruction in API 14.3.2 is 4 and 1/2 d. Now, in the new proposed rule, this is becoming 5b. I didn't see anything about this in the section-by-section discussion, so I wanted to ask, is there a discrepancy there?

- No. There's two different standards that we're referencing here. So 14.32 lists the minimum distance that the first obstruction can be downstream of the orifice plate. And if you look at a 0.75 beta ratio, that's normally a 4.5 diameters downstream. So that's as close as anything can possibly be to the plate.

But if you look at chapter 14.1, which is the sampling standard, that's where it says that at sampling close to the hydrocarbon dew point, that you should be at least 5 diameters downstream of the plate. And then we state in the preamble and in the reg that unless otherwise tested, we assume that the gas in the flow stream is at the hydrocarbon dew point.

And at the same time, if an operator has a sample probe that is closer than 5

diameters and can prove that they are not near the hydrocarbon dew point, that 5-diameter standard is for gas that is close to the hydrocarbon dew point. Does that make sense?

SPEAKER: Yep.

STORMY PHILLIPS: OK.

SPEAKER: Thank you.

- Excellent. Good question, Murat. Any other questions out there? Murat, if you're done please put your hand down. Thank you.

All right, we'll give another 10 or 15 seconds here for somebody to raise their hand or submit another question. All right, seeing none. We'll go ahead and move on and pass it back to you, Lucas.

- All right, thank you very much. I want to go and pass along a thank you to our participants. We really appreciate your engagement and your questions. And thank you to our presenters, and also, definitely, thank you to our tech support that we have behind the scenes back here.

Again, we will work to get the transcripts posted as quickly as possible to the BLM web page. And we appreciate your attendance today. And we'll go ahead and wrap up a little bit early. Thank you, and have a great day.