FEDERAL REGISTER

Vol. 80 Wednesday,
No. 189 September 30, 2015

Part IV

Department of the Interior

Bureau of Land Management

43 CFR Parts 3160 and 3170

Onshore Oil and Gas Operations; Federal and Indian Oil and Gas Leases; Measurement of Oil; Proposed Rule

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

43 CFR Parts 3160 and 3170

[15X.LLWO300000.L13100000.NB0000]

RIN 1004–AE16

Onshore Oil and Gas Operations; Federal and Indian Oil and Gas Leases; Measurement of Oil

AGENCY: Bureau of Land Management, Interior.

ACTION: Proposed rule.

SUMMARY: This proposed rule would replace Onshore Oil and Gas Order Number 4, Measurement of Oil (Order 4) with new regulations that would be codified in the Code of Federal Regulations (CFR). Order 4 establishes minimum standards for the measurement of oil produced from Federal and Indian (except Osage Tribe) leases to ensure that production is accurately measured and properly accounted for. Order 4 was issued in 1989.

The changes contemplated as part of this proposed rule would strengthen the Bureau of Land Management's (BLM) policies governing production accountability by updating its minimum standards for oil measurement to reflect the considerable changes in technology and industry practices that have occurred in the 25 years since Order 4 was issued. This proposed rule addresses the use of new oil meter technology, proper measurement documentation, and recordkeeping; establishes performance standards for oil measurement systems; and includes a mechanism for the BLM to review, and approve for use, new oil measurement technology and systems. The proposed rule expands the acts of noncompliance that would result in an immediate assessment under the existing regulations. Finally, it sets forth a process for the BLM to consider variances from these requirements.

DATES: Send your comments on this proposed rule to the BLM on or before November 30, 2015. The BLM is not obligated to consider any comments received after this date in making its decision on the final rule.

As explained later, the proposed rule would establish new information collection requirements that must be approved by the Office of Management and Budget (OMB). If you wish to comment on the information collection requirements in this proposed rule, please note that the OMB is required to make a decision concerning the collection of information contained in this proposed rule between 30 and 60 days after publication of this document in the **Federal Register**. Therefore, a comment to the OMB on the proposed information collection requirements is best assured of having its full effect if the OMB receives it by October 30, 2015.

ADDRESSES: *Mail:* U.S. Department of the Interior, Director (630), Bureau of Land Management, Mail Stop 2134 LM, 1849 C St. NW., Washington, DC 20240, Attention: 1004–AE16. *Personal or messenger delivery:* 20 M Street SE., Room 2134LM, Washington, DC 20003. *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the instructions at this Web site.

Comments on the information collection burdens: *Fax:* Office of Management and Budget (OMB), Office of Information and Regulatory Affairs, Desk Officer for the Department of the Interior, fax 202–395–5806. *Electronic mail: OIRA_Submission@omb.eop.gov.* Please indicate ''Attention: OMB Control Number 1004–XXXX,'' regardless of the method used to submit comments on the information collection burdens. If you submit comments on the information collection burdens, you should provide the BLM with a copy, at one of the addresses shown earlier in this section, so that we can summarize all written comments and address them in the final rule preamble.

FOR FURTHER INFORMATION CONTACT: Mike McLaren, 1625 West Pine St., P.O. Box 768, Pinedale, WY 82941, or by telephone at 307–367–5389. For questions relating to regulatory process issues, please contact Faith Bremner at 202–912–7441. Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1–800–877–8339 to contact these individuals during normal business hours. FIRS is available 24 hours a day, 7 days a week to leave a message or question with these individuals. You will receive a reply during normal business hours.

SUPPLEMENTARY INFORMATION:

Executive Summary

The Secretary of the Interior (Secretary) has the authority under various Federal and Indian mineral leasing laws to manage oil and gas operations on Federal and Indian (except Osage Tribe) lands, including, but not limited to, the Mineral Leasing Act, 30 U.S.C. 181 *et seq.*, the Mineral Leasing Act for Acquired Lands, 30 U.S.C. 351 *et seq.*, the Indian Mineral Leasing Act, 25 U.S.C. 396a *et seq.*, the Act of March 3, 1909, 25 U.S.C. 396, and the Indian Mineral Development Act, 25 U.S.C. 2101 *et seq.* Each of these statutes grants to the Secretary authority to promulgate necessary and appropriate rules and regulations. *See* 30 U.S.C. 189; 30 U.S.C. 359; 25 U.S.C. 396d; 25 U.S.C. 396; and 25 U.S.C. 2107. The Secretary has delegated this authority to the BLM.

The BLM's onshore oil and gas program is one of the most important mineral-leasing programs in the Federal Government. In fiscal year (FY) 2014, onshore Federal oil and gas leases produced about 148 million barrels of oil, 2.48 trillion cubic feet of natural gas, and 2.9 billion gallons of natural gas liquids, with a market value of more than $27 billion and generating royalties of almost $3.1 billion. Nearly half of these revenues are distributed to the States in which the leases are located. Leases on tribal and Indian lands produced 56 million barrels of oil, 240 billion cubic feet of natural gas, 182 million gallons of natural gas liquids, with a market value of almost $6 billion and generating royalties of over $1 billion that were all distributed to the applicable tribes and individual allottee owners. Despite the magnitude of this production, the BLM's rules governing how that oil is measured and accounted for are more than 25 years old and need to be updated and strengthened. Federal laws, technology, and industry standards have all changed significantly in that time.

The BLM implements its authority over Federal and Indian (except Osage Tribe) oil and gas leases through the regulations at 43 CFR part 3160. Those regulations authorize the BLM to issue Onshore Oil and Gas Orders (Orders) when necessary to implement and supplement the regulations. Over the years, the BLM issued seven Orders that deal with different aspects of oil and gas production.[1] Order 4, which was issued in 1989, focuses on oil measurement. This proposed rule would update Order 4 to reflect advancements in technology, industry standards, and changes in applicable legal requirements. This rule proposes to issue those updated requirements as regulations that would be codified in the CFR.

These updated requirements are the result of the BLM's evaluation of its existing requirements, based on its experience in the field, and the conclusion of multiple separate reports—one by the Secretary's Subcommittee on Royalty Management, issued in 2007; one by the Department's Office of Inspector General (OIG), issued

[1] These Onshore Orders were published in the **Federal Register**, both for public comment and in final form, but they do not appear in the CFR.

in 2009; and multiple by the Government Accountability Office (GAO). The GAO issued issue-specific reports in 2010 and 2015, and its recommendations related to the adequacy of the BLM's oil measurement rules generally formed one of the bases for the GAO's inclusion and continued presence of the BLM's oil and gas program on the GAO's High Risk List in 2011, 2013, and 2015. As explained later, each of these entities recommended that the BLM evaluate its existing oil measurement guidance to ensure it reflects current technologies and standards and, where appropriate, update the guidance and regulations accordingly. Up-to-date measurement requirements are critically important because they provide the mechanism to ensure that oil and gas produced from Federal and Indian leases are properly accounted for, thus ensuring that operators pay the proper royalties due.

As explained in detail below, the proposed rule makes a number of changes that modernize and strengthen the existing requirements of Order 4. For example, by recognizing advancements in measurement technologies and changes in industry practices, the proposed rule would allow operators to use a Coriolis measurement system (CMS) and eliminate the need for industry to submit and the BLM to process variance requests as it currently does when operators want to use a CMS.[2] Currently, under Order 4, the only meter that an operator can use on a lease without prior approval is a lease automatic custody transfer (LACT) system.[3] A LACT system uses a positive displacement (PD) meter, which requires more maintenance than a CMS. The BLM is proposing this change because field and laboratory testing have proven the CMS to be reliable and accurate. This will also make CMS requirements and standards uniform across the country, as opposed to varying by BLM state or field office as they currently do. Finally, this change would increase efficiency by saving operators the time it takes to apply for variances and the BLM the time it takes to process them.

In recognition that measurement techniques and technologies will continue to evolve, the BLM is also proposing to adopt a process and criteria that would allow it, through a new Production Measurement Team (PMT), to review and approve for use new measurement technologies that are demonstrated to be reliable and accurate. The new technologies would have to meet or exceed the same performance standards as those prescribed in this proposed rule.[4]

Similarly, the proposed rule strengthens existing requirements by prohibiting the use of automatic temperature/gravity compensators on LACT systems, which are currently required by Order 4. These compensators are designed to automatically adjust LACT totalizer readings to account for temperature changes and, in some cases, oil gravity changes. However, the use of automatic compensators means an uncorrected totalizer reading is not available for such systems, which means the BLM and the operator lack access to the raw data necessary to verify that the compensators are functioning correctly or that the totalizer reading is correct. To ensure such data exists, this proposed rule would, instead, require operators to use temperature averaging devices, which record and average the temperatures of the fluids flowing through the LACT. Under this system, the operator would use the data from the averaging devices to manually correct the volumes from the totalizer for the effects of temperature and oil gravity and the BLM would have the raw data necessary to verify the results and confirm system functionality. In the BLM's experience, the majority of LACT systems already use averaging devices, which can be used only under BLM-approved variances, while only about 20 percent use automatic temperature/gravity compensators.

The proposed rule would also strengthen existing regulations by increasing meter-proving requirements for operators who produce large volumes of oil. Current regulations require quarterly proving for all meters, except those meters that exceed a 100,000 bbl per month volume that are required to be proven monthly. Under this proposal, meters would be proven anytime the non-resettable totalizer increases by 50,000 bbl, or quarterly, whichever occurs first. Increased proving frequencies ensure that meter-factor changes that effect measurement are corrected before large volumes of production are measured incorrectly, which could adversely impact royalty determinations. This proposed change would affect approximately 5 percent of existing LACT systems nationwide.

Finally, the proposed rule would clarify existing regulations to require that oil storage tanks be vapor-tight and that all venting occur through a pressure-vacuum relief valve. This would minimize hydrocarbon gas lost to the atmosphere by ensuring that venting is done under controlled conditions primarily in response to changes in the ambient temperature.

Where appropriate, this proposed rule incorporates by reference new American Petroleum Institute (API) standards that address the activities covered by this rule as explained later.

I. Public Comment Procedures

If you wish to comment on the proposed rule, you may submit your comments by any one of several methods specified (see **ADDRESSES**). If you wish to comment on the information collection requirements, you should send those comments directly to the OMB as outlined (see **ADDRESSES**); however, we ask that you also provide a copy of those comments to the BLM.

Please make your comments as specific as possible by confining them to issues for which comments are sought in this notice, and explain the basis for your comments. The comments and recommendations that will be most useful and likely to influence agency decisions are:

1. Those that are supported by quantitative information or studies; and
2. Those that include citations to, and analyses of, the applicable laws and regulations.

The BLM is not obligated to consider or include in the Administrative Record for the rule comments received after the close of the comment period (see **DATES**) or comments delivered to an address other than those listed (see **ADDRESSES**).

Comments, including names and street addresses of respondents, will be

[2] A CMS is a metering system using a Coriolis flow meter in conjunction with a tertiary device, pressure transducer, and temperature transducer in order to derive and report net oil volume. A Coriolis flow meter is based on the principle that fluid mass flow through a tube results in a measurable twisting or distortion and consequent oscillation of the tube. Sensors measure that oscillation.

[3] A LACT system is a piece of equipment that automatically measures, analyzes, and transfers oil from a storage tank to a pipeline or tanker truck.

[4] The PMT would be distinguished from the Department of the Interior's Gas and Oil Measurement Team (DOI GOMT), which consists of members with gas or oil measurement expertise from the BLM, the ONRR, and the Bureau of Safety and Environmental Enforcement (BSEE). BSEE handles production accountability for Federal offshore leases. The DOI GOMT is a coordinating body that enables the BLM and BSEE to consider measurement issues and track developments of common concern to both agencies. The BLM is not proposing a dual-agency approval process for use of new measurement technologies for onshore leases. The BLM expects that the members of the BLM PMT would participate as part of the DOI GOMT.

available for public review at the address listed under **ADDRESSES** during regular hours (7:45 a.m. to 4:15 p.m.), Monday through Friday, except holidays. Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

II. Background

As noted earlier, the regulations at 43 CFR 3164.1 provide for the issuance of Onshore Orders to ''implement and supplement'' the regulations in part 3160. The table in 43 CFR 3164.1(b) lists the existing Orders. This proposed rule would revise and replace Order 4 and would govern measurement of oil production on Federal and Indian (except Osage Tribe) oil and gas leases. Order 4 has been in effect since August 23, 1989.[5] The BLM is proposing to codify the requirements of this proposed rule, which would replace Order 4, at a new 43 CFR subpart 3174.

III. General Overview of the Proposed Rule

Under the applicable law, royalty is owed to the United States on all production removed or sold from Federal and Indian oil and gas leases. The royalty payments are based on the measured production from those leases. Thus, it is critically important that the BLM ensure accurate measurement, proper reporting, and accountability. The BLM is pursuing proposed updates to Order 4's requirements because they are necessary to reflect changes in oil measurement practices and technology.

Order 4 has been in place since 1989. As a result, its equipment mandates and other requirements do not reflect improvements in oil measurement technologies and practices. In the BLM's experience, this has meant that industry has had to request, and the BLM has had to process, an increasing number of variances to authorize operators to install and use new technology, such as CMSs, even though the reliability of these systems has been long established. The variances are required because Order 4 does not contemplate CMSs. Additionally, since they are not included, Order 4 also does not provide uniform performance standards for these systems, which has led BLM state and field offices to specify their own standards. The BLM's experience in the field with Order 4's limitations is consistent with the findings of multiple separate independent reports.

In 2007, the Secretary appointed an independent panel—the Subcommittee on Royalty Management (Subcommittee)—to review the Department's procedures and processes related to the management of mineral revenues and to provide advice to the Department based on that review.[6] In a report dated December 17, 2007, the Subcommittee determined that the BLM's production accountability methods are ''unconsolidated, outdated, and sometimes insufficient.'' The report says:

- BLM policy and guidance have not been consolidated into a single document or publication, resulting in the BLM's 31 oil and gas field offices using varying policy and guidance (see page 31);
- Some BLM policy and guidance is outdated and some policy memoranda have expired (ibid.); and
- Some BLM State offices have issued their own ''Notices to Lessees and Operators'' (NTLs) for oil and gas operations. While such NTLs may have a positive effect on local oil and gas field operations, they nevertheless lack a national perspective and may introduce inconsistencies among the States (ibid.).

The Subcommittee specifically recommended that the BLM evaluate Order 4 to ensure that it includes sufficient guidance for ensuring that accurate royalties are paid on Federal oil production. In response, the Interior Department formed a Fluid Minerals Team, comprised of Departmental oil and gas experts. The team determined that Order 4 should be updated in light of changes in technology and BLM and industry practices. In addition to the Subcommittee report, findings and recommendation addressing similar issues have been issued by the GAO (Report to Congressional Requesters, *Oil and Gas Management, Interior's Oil and Gas Production Verification Efforts Do Not Provide Reasonable Assurance of Accurate Measurement of Production Volumes*, GAO–10–313 (GAO 2010 Report), and Report to Congressional Requesters, *Oil and Gas Resources, Interior's Production Verification Efforts: Data Have Improved but Further Actions Needed*, GAO 15–39 (GAO 2015 Report)) and the OIG (*Bureau of Land Management's Oil and Gas Inspection and Enforcement Program*, CR–EV–0001–2009).

In its 2010 report, the GAO found that the Department's measurement regulations and policies do not provide reasonable assurances that oil and gas are accurately measured because, among other things, its policies for tracking where and how oil and gas are measured are not consistent and effective (GAO 2010 Report, p. 20). The report also found that the BLM's regulations do not reflect current industry-adopted measurement technologies and standards designed to improve oil and gas measurement (ibid.). The GAO recommended that Interior provide Department-wide guidance on measurement technologies not addressed in current regulations and approve variances for measurement technologies in instances when the technologies are not addressed in current regulations or Department-wide guidance (see ibid., p. 80). The OIG report made a similar recommendation that the BLM, ''Ensure that oil and gas regulations are current by updating and issuing onshore orders. . . .'' (see page 11). In its 2015 report, the GAO reiterated that ''Interior's measurement regulations do not reflect current measurement technologies and standards,'' and that this ''hampers the agency's ability to have reasonable assurance that oil and gas production is being measured accurately and verified. . . .'' (GAO 2015 Report, p. 16.) Among its recommendations were that the Secretary direct the BLM to ''meet its established time frame for issuing final regulations for oil measurement.'' (Ibid., p. 32.)

The GAO's recommendations related to the adequacy of the BLM's oil measurement rules are also significant because they formed one of the bases for the GAO's inclusion of the BLM's oil and gas program on the GAO's High Risk List in 2011 (Report to Congressional Committees, *High Risk Series, An Update*, GAO–11–278). Specifically, the GAO concluded in 2011 ''that Interior's verification of the volume of oil . . . produced from federal leases—on which royalties are due the federal government—does not provide reasonable assurance that operators are accurately measuring and reporting these volumes.'' (GAO–11–278, p.15.) Because the GAO's recommendations have not yet been fully implemented, the onshore oil and gas program has remained on the High

[5] It was published on February 24, 1989 (54 FR 8086).

[6] The Subcommittee was commissioned to report to the Royalty Policy Committee, which is chartered under the Federal Advisory Committee Act to provide advice to the Secretary and other Departmental officials responsible for managing mineral leasing activities and to provide a forum for the public to voice concerns about mineral leasing activities.

Risk List in subsequent updates in 2013 (Report to Congressional Committees, *High Risk Series, An Update,* GAO–13–283) and 2015 (Report to Congressional Committees, *High Risk Series, An Update*, GAO–15–290).

The provisions of this proposed rule respond to the recommendations by the Subcommittee, the GAO, and the OIG. They were also developed by the BLM to enhance and clarify some of the requirements in Order 4 in response to changes in technology, BLM field experience, and changes to applicable statutory requirements.

The following table provides an overview of the changes contemplated as part of this proposed rule and identifies the substantive changes relative to Order 4.

Order 4	Proposed rule	Substantive changes
I. Introduction—A. Authority	No section in this proposed rule	This section of Order 4 would appear in proposed 43 CFR 3170.1. New subpart 3170 was proposed separately in connection with proposed new 43 CFR subpart 3173 (site security), (80 FR 40768, July 13, 2015).
I. Introduction—B. Purpose	No section in the proposed rule	The purpose of this proposed rule is to revise and replace Order 4 with a new regulation that would be codified in the CFR.
I. Introduction—C. Scope	No section in this proposed rule	See proposed new 43 CFR 3170.2 (80 FR 40802, July 13, 2015).
II. Definitions	43 CFR 3174.1	See also proposed new 43 CFR 3170.3 (80 FR 40802, July 13, 2015), which would add definitions of some of the key terms and would add a list of acronyms that are used in this proposed rule. Terms for which new definitions would be added include: Configuration log, CMS, event log, opaque oil, quantity transaction record (QTR), resistance thermal device (RTD), tertiary device, and unity.
III. Requirements—A. Required Recordkeeping.	No section in this proposed rule	See proposed new 43 CFR 3170.7 (80 FR 40804, July 13, 2015).
III. Requirements—B. General	43 CFR 3174.2 and 3174.3	The proposed rule would remove all specific reference to: ''Violation'' (major or minor), ''Corrective Action'' (what needs to be done to resolve the violation), and ''Normal Abatement Period'' (how much time is allowed to correct the violation). The BLM will address these issues in internal guidance documents (handbooks, manuals or instructional memoranda (IMs)). This proposed rule would specify that oil may be produced into and stored only in tanks meeting the minimum requirements of this rule. This proposed rule would also establish overall performance requirements in terms of uncertainty levels, bias, and verifiability of measurement.
None	43 CFR 3174.4	The proposed rule would adopt the latest versions of certain API and ASTM International (ASTM) standards.
III. Requirements—C. Oil Measurement by Tank Gauging.	43 CFR 3174.5 and 3174.6	This proposed rule would require all oil storage tank hatches, connections, and other access points to be vapor-tight and would require appropriate pressure-vacuum relief systems. This proposed rule would require the operator to submit tank calibration charts (tank tables) to the authorized officer (AO) within 30 days of calibrating or recalibrating. This entire section has been reorganized to give the step-by-step procedure to correctly perform the tank gauging operation. The provision specifically references API 18.1 for tanks of 1,000 bbl or less; however, the procedure applies to all tanks, including those tanks with capacities greater than 1,000 bbl.
III. Requirements—D. Oil measurement by Positive Displacement Metering System.	43 CFR 3174.7 and 3174.8	This proposed rule would require LACT systems to use electronic temperature averaging devices, and would prohibit the use of automatic temperature/gravity compensators. This proposed rule would require operators, within 24 hours, to notify the AO of any LACT system failures or equipment malfunctions, or other failures that could adversely affect oil measurement.
None	43 CFR 3174.9 and 3174.10	This proposed rule would allow the use of CMSs for the measurement of oil and would add sections on CMS component and operating requirements.
III. Requirements—D. 3. Sales Meter Proving Requirements.	43 CFR 3174.11	This proposal would change the oil volume proving requirements to require proving for every 50,000 bbl of volume that flows through the meter, or quarterly, whichever occurs first. The proposed rule would also establish requirements for the sizing of pipe provers, define the conditions under which proving must occur, and include verification of pressure and temperature measurement devices.
None	43 CFR 3174.12	This proposed rule would require oil measurement tickets and specify minimum information requirements contained on the tickets. These requirements appear in the current Onshore Oil and Gas Order No. 3 (Order 3). Three new requirements would be added. Operators would be required to: (1) Include BLM-approved Facility Measurement Point (FMP) numbers on each measurement ticket; (2) Notify the AO within 2 days if the operator disagrees with the tank gauger's measurement; and (3) Fill out measurement tickets for LACT systems and CMSs. The proposed rule would allow the use of electronic measurement tickets.

Order 4	Proposed rule	Substantive changes
III. Requirements—E. Oil Measurement by Other Methods or at Other Locations Acceptable to the Authorized Officer, 1. and 2.	43 CFR 3174.13	This proposed rule would remove language concerning measurement on and off the lease, which would be moved to the new proposed rule to replace Order 3. See proposed subpart 3173 (80 FR 40768, July 13, 2015). It also proposes that all alternate measurement system approval requests be reviewed by the PMT.
F. Determination of Oil Volumes by Methods Other Than Measurement.	43 CFR 3174.14	The proposed rule would retain the requirements of Order 4 with respect to determining volumes of oil that cannot be measured as a result of spillage or leakage.
None	43 CFR 3174.15	This proposed rule would add six new violations as follows, each of which would be subject to an immediate assessment of $1,000: (1) Any required FMP LACT system components missing or nonfunctioning; (2) Failure to notify the AO within 24 hours of any FMP LACT system failure or equipment malfunction resulting in use of an unapproved alternate method of measurement; (3) Any required FMP CMS components missing or nonfunctioning; (4) Failure to notify the AO within 7 days of any changes to any CMS internal calibration factors; (5) Failure to meet the proving frequency requirements for an FMP; and (6) Failure to obtain a written variance approval before use of any oil measurement method other than manual tank gauging, LACT system, or CMS at an FMP.
IV. Variances from Minimum Standards.	No section in this proposed rule	See proposed new 43 CFR 3170.6 (80 FR 40778, July 13, 2015).

IV. Section-by-Section Analysis

This proposed rule would be codified primarily in a new 43 CFR subpart 3174 within a new part 3170. The BLM is concurrently preparing a separate proposed rule to update and replace Onshore Oil and Gas Order No. 5 (Order 5) (gas measurement) that the BLM intends to codify at a new 43 CFR subpart 3175. The BLM has previously published a separate proposed rule to replace Onshore Oil and Gas Order No. 3 (Order 3) (site security), which the BLM would codify at a new 43 CFR subpart 3173. Given this structure, it is the BLM's intent that a new 43 CFR subpart 3170 would contain definitions of certain terms common to more than one of the proposed rules, as well as other provisions common to all rules, *i.e.*, provisions prohibiting by-pass of and tampering with meters; procedures for obtaining variances from the requirements of a particular rule; requirements for recordkeeping, records retention, and submission; and administrative appeal procedures. Subpart 3170 was proposed previously in conjunction with proposed subpart 3173 (80 FR 40768, July 13, 2015). All of the definitions and substantive provisions of proposed subpart 3170 would apply to the new subpart 3174 proposed here.

Certain provisions of this proposed rule would result in amendments to related provisions in the onshore oil and gas operations rules in 43 CFR part 3160. The proposed amendments to those provisions are discussed below.

Subpart 3174 and Related Provisions

§ 3174.1 Definitions and Acronyms

Section 3174.1 would define the terms and acronyms that are used in proposed subpart 3174. With the proposal to integrate new technology into the rule, such as the use of CMSs, related definitions would need to be added to the proposed regulations. Defining these terms and acronyms is necessary to ensure consistent interpretation and implementation of this proposed rule. As such, the proposed rule would add a definition of ''Coriolis measurement system,'' and define the primary components of a CMS. Related definitions would be added to establish the minimum required components of an event log, a configuration log, and a quantity transactions record. Definitions for technical terms, such as ''opaque oil,'' ''RTD,'' and ''turbulent flow,'' would be added because they may not be readily understood. Definitions of many of the terms already defined in Order 4 are also included in this proposed rule.

§ 3174.2 General Requirements

Paragraphs (a) through (d) of proposed § 3174.2 refer the reader to other sections in this proposed rule that contain the proposed requirements for oil storage tanks, on-lease oil measurement, commingling, and FMP numbers, respectively.

Proposed § 3174.2(e) would specify that all equipment used to measure the volume of oil for royalty purposes installed after the effective date of this subpart must comply with the requirements of this subpart. Operators would have 180 days after the effective date of the final rule to bring existing equipment used to measure oil for royalty purposes installed before the effective date of the final rule into compliance with the proposed requirements of this subpart. With respect to the proposed compliance phase-in period of 180-days for existing equipment, the BLM would be interested in receiving comments and information about the lead-time required to order, install, and configure any new equipment that might be required at existing facilities as result of the proposed rule's requirements.

Proposed § 3174.2(f) would exempt meters used for allocation measurement as part of a commingling approval granted under a new 43 CFR 3173.14 from complying with the requirements of this subpart. The new 43 CFR 3173.14 has been proposed under a separate rulemaking that would update and replace Order 3 (site security). In the restricted circumstances under which commingling would be approved under that proposed provision, it would no longer be necessary for allocation meters to meet the standards of either the current or proposed oil measurement and gas measurement rules.

§ 3174.3 Specific Measurement Performance Requirements

Proposed § 3174.3(a)(1) would set overall performance standards for measuring oil produced from Federal and Indian leases, regardless of the type of meters or measurement method used. Order 4 has no explicit statement of performance standards. The BLM would apply the performance standards to individual LACT meters or CMSs as part of the compliance process. This would accommodate the range of meters and related equipment available to operators. The performance goals could result in operating limitations (such as a minimum flow rate through the meter); however, they could also allow flexibility for various operational functions (for example, the range of error between the meter in the field and the meter prover between successive runs during a proving). To facilitate this, the BLM is considering the development of an uncertainty calculator similar to the BLM's gas uncertainty calculator currently in use. The performance standards would also provide specific objective criteria with which the BLM could analyze variance requests for meters, measurement systems, and procedures not specifically addressed in the proposed rule.

Proposed § 3174.3(a)(1) would establish the maximum allowable volume measurement uncertainty. Uncertainty indicates the risk of measurement error. The BLM believes that the measurement uncertainties discussed below are reasonable, based on equipment capabilities, industry standard practices and procedures, and BLM field experience. Please specifically comment on whether other volume measurement uncertainties would be more appropriate for the range of meters and related equipment currently in use on Federal lands.

For FMPs measuring more than 10,000 bbl per month, the maximum proposed overall volume measurement uncertainty would be ±0.35 percent. The BLM derived the proposed ±0.35 percent uncertainty by calculating the implied uncertainty for a PD meter meeting the minimum requirements of Order 4. The implied uncertainty calculation includes the effects of the maximum allowable meter-factor drift between meter provings; the minimum standard for repeatability during a proving; the accuracy of the pressure and temperature transducers used to determine the correction for pressure on liquids (CPL) and the correction for temperature on liquids (CTL) factors; and the uncertainty of the CPL and CTL calculation. Based on this analysis, the overall uncertainty of a PD meter complying with Order 4 is ±0.32 percent. Therefore, the BLM believes a ±0.35 percent uncertainty requirement is reasonable for both PD meters and CMS measurement at a 10,000-bbl-per-month threshold to ensure accurate royalty measurement for a high monthly volume.

For FMPs measuring more than 100 bbl per month and less than or equal to 10,000 bbl per month, the maximum proposed overall measurement uncertainty would be ±1.0 percent. The proposed ±1.0 percent is based on the uncertainty calculations of manual tank gauging meeting the minimum requirements of Order 4, which show that uncertainty is dependent on the volume removed. The proposed ±1.0 percent is the average calculated uncertainty for a typical 100–200 bbl truck load-out.

Based on comments from public meetings held on April 24 and 25, 2013 (discussed below), the BLM is proposing a third tier for FMPs measuring less than 100 bbl per month. The proposed overall allowed uncertainty for the third tier would be ±2.5 percent, which would still provide minimal risk of royalty loss, while allowing the maximum ultimate recovery from low-volume leases. The proposed ±2.5 percent is the highest calculated uncertainty for manual tank gauging meeting the minimum requirements of Order 4.

Under proposed § 3174.3(a)(2), only a BLM State Director could grant an exception to the prescribed uncertainty levels. Granting an exception would require a showing that meeting the required uncertainly level would involve extraordinary cost or unacceptable adverse environmental effects, and the written concurrence of the BLM Director.

Proposed § 3174.3(b) would establish the degree of allowable bias in a measurement. Bias, unlike uncertainty, results in measurement error, whereas uncertainty only indicates the risk of measurement error. For all FMPs, no statistically significant bias would be allowed. (The BLM acknowledges that it is virtually impossible to completely remove all bias in measurement.) When a measurement device is tested against a laboratory device or prover, there is often slight disagreement, or apparent bias, between the two. However, both the measurement device being tested and the laboratory device or prover have some inherent level of uncertainty. If the disagreement between the measurement device being tested and the laboratory device or prover is less than the uncertainty of the two devices combined, then it is not possible to distinguish apparent bias in the measurement device being tested from inherent uncertainty in the devices (sometimes referred to as ''noise'' in the data). Therefore, the BLM does not consider apparent bias that is less than the uncertainty of the two devices combined to be statistically significant.

Proposed § 3174.3(c) would require that all measurement equipment allow for independent verification by the BLM. As with the bias requirements, Order 4 only allows measurement methods that can be independently verified by the BLM and, therefore, this requirement would not change existing requirements. The verifiability requirement in this section would prohibit the use of measurement equipment that does not allow for independent verification. For example, if a new meter were to be developed that did not record the raw data used to derive a volume, that meter could not be used at an FMP, because without the raw data the BLM would be unable to independently verify the volume. Similarly, if a meter were to be developed that used proprietary methods that precluded the ability to recalculate volumes, its use would also be prohibited.

§ 3174.4 Incorporation by Reference

The proposed rule would incorporate a number of industry standards, either in whole or in part, without republishing the standards in their entirety in the CFR, a practice known as incorporation by reference. These standards were developed through a consensus process, facilitated by the API and the ASTM, with input from the oil and gas industry. The BLM has reviewed these standards and determined that they would achieve the intent of 43 CFR 3174.5 through 3174.13 of this proposed rule. The legal effect of incorporation by reference is that the incorporated standards become regulatory requirements. This proposed rule would incorporate the current versions of the standards listed.

Some of the standards referenced in this section would be incorporated in their entirety. For other standards, the BLM would incorporate only those sections that are enforceable, meet the intent of § 3174.3 of this proposed rule, or do not need further clarification.

The proposed incorporation of industry standards follows the requirements found in 1 CFR part 51. Industry standards proposed for incorporation are eligible under 1 CFR 51.7 because, among other things, they will substantially reduce the volume of material published in the **Federal Register**; the standards are published, bound, numbered, and organized; and the standards proposed for incorporation are readily available to the general public through purchase from the standards organization or through inspection at any BLM office with oil and gas administrative responsibilities. 1 CFR 51.7(a)(3) and (a)(4). The language of incorporation in proposed 43 CFR 3174.4 meets the requirements of 1 CFR 51.9. Where appropriate, the BLM proposes to incorporate an industry standard governing a particular process by reference and then impose requirements that are in addition to and/or modify the requirements imposed by that standard (*e.g.*, the BLM sets a specific value for a variable where the industry standard proposed a range of values or options).

All of the API and ASTM materials for which the BLM is seeking incorporation by reference are available for inspection at the BLM, Division of Fluid Minerals; 20 M Street SE., Washington, DC 20003; 202–912–7162; and at all BLM offices with jurisdiction over oil and gas activities. The API materials are available for inspection at the API, 1220 L Street NW., Washington, DC 20005; telephone 202–682–8000; API also offers free, read-only access to some of the material at *www.publications.api.org.* The ASTM materials are available for inspection at the ASTM, 100 Bar Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428; telephone 1–877–909–2786; *www.astm.org/Standard/index.shtml*; ASTM also offers free read-only access to the material at *www.astm.org/READINGLIBRARY/*.

The following describes the API and ASTM standards that the BLM proposes to incorporate by reference into this rule:

API Manual of Petroleum Measurement Standards (MPMS) Chapter 2, Section 2A, Measurement and Calibration of Upright Cylindrical Tanks by the Manual Tank Strapping Method, 1st Ed., February 1995, Reaffirmed February 2012 (''API 2.2A''). This standard describes the procedures for calibrating upright cylindrical tanks used for storing oil.

API MPMS Chapter 3, Section 1A, Standard Practice for the Manual Gauging of Petroleum and Petroleum Products, 3rd Ed., August 2013 (''API 3.1A''). This standard describes the following: (a) The procedures for manually gauging the liquid level of petroleum and petroleum products in non-pressure fixed roof tanks; (b) Procedures for manually gauging the level of free water that may be found with the petroleum or petroleum products; (c) Methods used to verify the length of gauge tapes under field conditions and the influence of bob weights and temperature on the gauge tape length; and (d) Influences that may affect the position of gauging reference point (either the datum plate or the reference gauge point).

API MPMS Chapter 4, Section 1, Introduction, 3rd Ed., February 2005, Reaffirmed June 2014 (''API 4.1''). Section 1 is a general introduction to the subject of proving meters. API MPMS Chapter 4, Section 2, Displacement Provers, 3rd Ed., September 2003, Reaffirmed March 2011 (''API 4.2,'' and ''API 4.2, Eq. 12''). This standard outlines the essential elements of meter provers that do, and also do not, accumulate a minimum of 10,000 whole meter pulses between detector switches, and provides design and installation details for the types of displacement provers that are currently in use. The provers discussed in this chapter are designed for proving measurement devices under dynamic operating conditions with single-phase liquid hydrocarbons.

API MPMS Chapter 4, Section 5, Master-Meter Provers, 3rd Ed., November 2011 (''API 4.5''). This standard covers the use of displacement and Coriolis meters as master meters. The requirements in this standard are for single-phase liquid hydrocarbons.

API MPMS Chapter 4, Section 6, Pulse Interpolation, 2nd Ed., May 1999, Reaffirmed October 2013 (''API 4.6''). This standard describes how the double-chronometry method of pulse interpolation, including system operating requirements and equipment testing, is applied to meter proving.

API MPMS Chapter 4, Section 9, Part 2, Methods of Calibration for Displacement and Volumetric Tank Provers, Determination of the Volume of Displacement and Tank Provers by the Waterdraw Method of Calibration, 1st Ed., December, 2005, Reaffirmed September 2010 (''API 4.9.2''). This standard covers all of the procedures required to determine the field data necessary to calculate a Base Prover Volume of Displacement Provers by the Waterdraw Method of Calibration.

API MPMS Chapter 5, Section 6, Measurement of oil by Coriolis Meters, 1st Ed., October 2002, Reaffirmed November 2013 (''API 5.6,'' ''API 5.6.3.2(e),'' API 5.6.8.3,'' ''API 5.6.9.1.2.1,'' and ''API 5.6, Eq. 2''). This standard is applicable to custody-transfer applications for liquid hydrocarbons. Topics covered are API standards used in the operation of Coriolis meters, proving and verification using volume-based methods, installation, operation, and maintenance.

API MPMS Chapter 6, Section 1, Lease Automatic Custody Transfer (LACT) Systems, 2nd Ed., May 1991, Reaffirmed May 2012 (''API 6.1''). This standard describes the design, installation, calibration, and operation of a LACT system.

API MPMS Chapter 7, Temperature Determination, 1st Ed., June 2001, Reaffirmed February 2012 (''API 7'' and ''API 7.1''). This standard describes the methods, equipment, and procedures for determining the temperature of petroleum and petroleum products under both static and dynamic conditions.

API MPMS Chapter 8, Section 1, Standard Practice for Manual Sampling of Petroleum and Petroleum Products, 4th Ed., October 2013, (''API 8.1''). This standard covers procedures and equipment for manually obtaining samples of liquid petroleum and petroleum products from the sample point into the primary containers.

API MPMS Chapter 9, Section 3, Standard Test Method for Density, Relative Density, and API Gravity of Crude Petroleum and Liquid Petroleum Products by Thermohydrometer Method, 3rd Ed., December 2012 (''API 9.3''). This standard covers the determination, using a glass thermohydrometer in conjunction with a series of calculations, of the density, relative density, or API gravity of crude petroleum, petroleum products, or mixtures of petroleum and nonpetroleum products normally handled as liquids and having a Reid vapor pressures of 101.325 kPa (14.696 psi) or less.

API MPMS Chapter 10 Section 4, Determination of Water and/or Sediment in Crude Oil by the Centrifuge Method (Field Procedure), 4th Ed., October 2013 (''API 10.4,'' ''10.4.9,'' and ''10.4.9.2''). This standard describes the field centrifuge method for determining both water and sediment, or sediment only, in crude oil.

API MPMS Chapter 11, Section 1, Temperature and Pressure Volume Correction Factors for Generalized Crude Oils, Refined Products and Lubricating Oils, 2nd Ed., May 2004, including Addendum 1, September 2007, Reaffirmed August 2013 (''API 11.1''). This standard provides the algorithm and implementation procedure for the correction of temperature and pressure effects on density and volume of liquid hydrocarbons, which fall within the categories of crude oil.

API MPMS Chapter 12, Section 2, Part 1, Calculation of Petroleum Quantities Using Dynamic Measurement Methods and Volumetric Correction Factors, 2nd Ed., May 1995, Reaffirmed March 2014 (''API 12.2.1''). This standard provides standardized calculation methods for the quantification of liquids and the determination of base prover volumes under defined conditions. The standard specifies the equations for computing correction factors, rules for rounding, calculational sequence, and discrimination levels to be employed in the calculations.

API MPMS Chapter 12, Section 2, Part 3, Calculation of Petroleum Quantities Using Dynamic Measurement Methods and Volumetric Correction Factors, Proving Report, 1st Ed., October 1998, Reaffirmed March 2009 (''API 12.2.3''). This standard provides standardized calculation methods for the determination of meter factors under defined conditions. The criteria contained here will allow different entities using various computer languages on different computer hardware (or by manual calculations) to arrive at identical results using the same standardized input data. This document also specifies the equations for computing correction factors, including the calculation sequence, discrimination levels, and rules for rounding to be employed in the calculations.

API MPMS Chapter 12, Section 2, Part 4, Calculation of Petroleum Quantities Using Dynamic Measurement Methods and Volumetric Correction Factors, Calculation of Base Prover Volumes by the Waterdraw Method, 1st Ed., December, 1997, Reaffirmed March 2009 (''API 12.2.4''). This standard provides standardized calculation methods for the quantification of liquids and the determination of base prover volumes under defined conditions. The criteria contained in this document allows different individuals, using various computer languages on different computer hardware (or manual calculations), to arrive at identical results using the same standardized input data. This standard specifies the equations for computing correction factors, rules for rounding, the sequence of the calculations, and the discrimination levels of all numbers to be used in these calculations.

API MPMS Chapter 18, Section 1, Measurement Procedures for Crude Oil Gathered From Small Tanks by Truck, 2nd Ed., April 1997, Reaffirmed February 2012 (''API 18.1''). This standard describes the procedures, organized into a recommended sequence of steps, for manually determining the quantity and quality of crude oil being transferred under field conditions.

API MPMS Chapter 21, Section 2, Electronic Liquid Volume Measurement Using Positive Displacement and Turbine Meters, 1st Ed., June 1998, Reaffirmed August 2011 (''API 21.2,'' ''API 21.2.10,'' ''21.2.10.2,'' ''21.2.10.6,'' and ''API 21.2.9.2.13.2a''). This standard provides for the effective utilization of electronic liquid measurement systems for custody-transfer measurement of liquid hydrocarbons.

API Recommended Practice (RP) 12 R1, Setting, Maintenance, Inspection, Operation and Repair of Tanks in Production Service, 5th Ed., August 1997, Reaffirmed April 2008 (''API RP 12 R1''). This recommended practice is a guide on new tank installations and maintenance of existing tanks. Specific provisions of this recommended practice are identified as requirements in this proposed rule.

API RP 2556, Correction Gauge Tables For Incrustation, 2nd Ed., August 1993, Reaffirmed August 2013 (''API RP 2556''). This recommended practice provides for correcting gauge tables for incrustation applied to tank capacity tables. The tables given in this recommended practice show the percent of error of measurement caused by varying thicknesses of uniform incrustation in tanks of various sizes.

ASTM D–1250, Table 5A, Generalized Crude Oils Correction of Observed Gravity to API Gravity at 60o F, September 1980 (''ASTM Table 5A''). Table 5A gives the values of API gravity at 60o F corresponding to an API hydrometer reading at observed temperatures other than 60o F.

§§ 3174.5 and 3174.6 Oil Measurement by Manual Tank Gauging—Procedures

Proposed § 3174.5(a) would provide that measurement by manual tank gauging must accurately compute the total net standard volume of oil withdrawn from a properly calibrated sales tank by following a proper sequence of activities outlined in § 3174.6.

Proposed § 3174.5(b) would include requirements that all oil storage tanks, hatches, connections, and other access points be vapor tight and that all venting occur through a pressure-vacuum relief valve placed in the vent line or in the connection with another tank. This requirement would minimize hydrocarbon gas lost to the atmosphere by ensuring that venting is done under controlled conditions through the pressure-vacuum relief valve primarily in response to changes in ambient temperature. This requirement would be added to eliminate confusion over the intent of the language in Order 4 in this area. This change would expressly state the required condition—vapor-tight with a pressure-vacuum integrity device. This section would further clarify that each storage tank be clearly identified by a unique number. Other existing requirements in Order 4 are included in this proposed section, namely, that each oil storage tank must be set and maintained level and must be equipped with a distinct gauging reference point.

Proposed § 3174.5(c) would retain the current Order 4 requirement that oil storage tanks associated with an FMP that are measured by tank gauging be accurately calibrated, and would include additional specifics regarding calibration requirements. Proposed § 3174.5(c)(1) would specify that the tank capacity tables must be calculated by actual tank measurements, which would eliminate using general formulas, such as the formula created for calculating the volume of a typical 400 bbl tank using 1.67 bbl/inch. This proposed paragraph would specify that the volume be measured in barrels and change the incremental height measurement from the current ¼ inch to ⅛ inch when calculating the capacity tables. This change would match the gauging accuracy changes from the current Order 4 gauging of ¼ inch to the proposed ⅛ inch gauging accuracy, which would match the current industry standard.

Proposed § 3174.5 paragraph (c)(2) and (3) would retain the current Order 4 requirement that storage tanks associated with an FMP and measured by tank gauging be recalibrated if they are relocated, repaired, or the capacity is changed as a result of denting, damage, installation, removal of interior components, or other alterations. However, instead of the existing requirement that operators submit sales tank calibration charts upon request from the AO, they would be required to submit the charts to the AO within 30 days after calibration. This proposed change would ensure that BLM personnel use the latest charts when conducting inspections or audits.

Proposed § 3174.6(a) would list the proper sequence of activities for measuring oil by manual tank gauging along with the corresponding section reference. The BLM is proposing the sequence listed in the API Manual of Petroleum Measurement Standards (MPMS) Chapter 18.1 for all size tanks that would be used as FMPs. API MPMS 18.1 specifically covers tank sizes of 1,000 bbl or less, but the most recent edition of the API standards referenced in MPMS 18.1 has removed many of the procedural differences between the tank sizes, making this sequence acceptable for tanks of all sizes.

Proposed § 3174.6(b)(1) would retain the current Order 4 requirement that tanks must be isolated for 30 minutes to allow for tank contents to settle before proceeding with tank gauging operations.

Proposed § 3174.6(b)(2) would change the requirements for determining the temperature of oil in a sales tank that is used as an FMP. The minimum thermometer immersion times listed in API MPMS Chapter 18.1 and in API

MPMS Chapter 7 would be used, which would vary depending on the oil API oil gravity, whether the thermometer is stationary or in motion, and whether the thermometer was electronic or mechanical (wood-back).

Proposed § 3174.6 paragraphs (b)(3) through (9) would follow API MPMS chapter 18.1, the industry standard, in prescribing the procedure for conducting the step-by-step process of manual tank gauging and the proper equipment usage. This is a change from Order 4, which lists the equipment required, but not the proper sequence of processes. The gauging measurement accuracy would be changed from the current Order 4 requirement of ¼ inch gauging accuracy to ⅛ inch gauging accuracy. This change is proposed to match industry standards that now indicate gauging should be accurate to within ⅛-inch.

Proposed § 3174.6(b)(10) would list the proper documentation of a measurement ticket, to provide for consistent documentation and ensure that the operator uses the correct reference material.

§ 3174.7 LACT System—General Requirements

Proposed § 3174.7 paragraphs (a) through (c) would refer to other sections of this proposed rule for construction and operation requirements for LACT systems, proving requirements, and measurement tickets, and would provide a table of the LACT system requirements and corresponding section references.

Proposed § 3174.7 paragraphs (d) through (f) would retain current requirements that all components of a LACT system be accessible for inspection by the AO and that the AO must be notified of all LACT system failures that may have resulted in measurement error. The proposed rule would modify this notification requirement to put a 24-hour time limit on the notification. This would be added to ensure that the BLM is able to verify that all oil volumes are properly derived and accounted for, and verify any alternative measurement method, meter repairs, or meter provings. This proposed rule would retain the current Order 4 requirement that all oil samples taken from the LACT system samplers for determination of temperature, oil gravity, and sediment and water (S&W) content must meet the same minimum standards set in the manual tank gauging sections.

Proposed § 3174.7(g) would prohibit the use of Automatic Temperature Compensators (ATCs) and Automatic Temperature and Gravity Compensators (ATGs) on LACT systems. Order 4 requires these devices. Instead, the proposed rule would require the use of an electronic temperature averaging device. ATCs and ATGs are designed to automatically adjust the LACT totalizer reading to compensate for changes in temperature and, in some cases, for changes in oil gravity as well. Unfortunately, the accuracy or operation of these devices cannot be verified in the field and there is no record of the original, uncorrected, totalizer readings. Therefore, the BLM believes that the use of these devices inhibits its ability to verify the reported volumes because there is no source record generated and they degrade the accuracy of measurement. Because there are relatively few LACT systems that still employ ATCs or ATGs, the BLM does not believe this requirement would result in significant costs to the industry.

§ 3174.8 LACT System—Components and Operating Requirements

Proposed § 3174.8, with the exception of proposed § 3174.8(b)(11), would contain the same LACT system components and operating requirements as Order 4.

Proposed § 3174.8(b)(11) would establish requirements for electronic temperature averaging devices, using API standards where available. Order 4 does not address electronic temperature averaging devices.

§§ 3174.9 and 3174.10 Coriolis Measurement Systems

Proposed §§ 3174.9 and 3174.10 would create new sections for CMSs, which are not addressed in Order 4. Order 4 allows only for the use of PD meters with LACT systems. The proposal to allow the use of Coriolis meters in this rule is based on technological advancements that provide for measurement accuracy that meets or exceeds the overall performance standards in proposed § 3174.3. Field and laboratory testing of the Coriolis meter has proven it to be a reliable, accurate meter when installed, configured, and operated correctly.

Proposed § 3174.9 paragraphs (a) through (c) would specify that CMSs must consist of components that have been reviewed by the PMT, approved by the BLM, and identified and described on the nationwide approval list at *www.blm.gov.* Installations meeting the proposed standards described in this section, § 3174.10, and API 5.6 (incorporated by reference) would not require additional BLM approval. CMS proving must meet the proving requirements described in proposed § 3174.11 and measurement tickets would be required, as described in proposed § 3174.12(b).

Proposed § 3174.9(d) would provide a table of the requirements, section reference, and applicable API standards under which oil measurement under a CMS must follow.

Proposed § 3174.9(e) would list the components in order from upstream to downstream of a CMS used at an FMP. The requirements for a CMS would generally parallel the requirements for LACT systems.

Proposed § 3174.9(e)(1) through (4) would parallel the LACT system equipment requirements and are needed to ensure accurate and proper functioning of a CMS. A charge pump may be necessary to maintain required pressure and flow rate to achieve uncertainty levels proposed under § 3174.3(a). A block valve upstream of the meter would be required for zero value verification. An air/vapor eliminator would be required upstream of the meter.

Proposed § 3174.9(e)(5) through (6) would set accuracy thresholds for temperature and pressure measurement devices that are part of a CMS installed downstream of the meter, but upstream of the proving connections. These devices are needed to calculate the CPL and CTL factors. The uncertainties of these devices would be used to ensure the CMS meets or exceeds the uncertainty levels that would be required by proposed § 3174.3(a). Under proposed § 3174.9(e)(7), a density measurement verification point would follow the temperature and pressure measurement devices.

Proposed § 3174.9(e)(8) would not require a composite sampling system if the S&W content is not used to determine net oil volume. Measurement using a PD meter requires a composite sampling system and determines net oil volume by deducting S&W content. In contrast, Coriolis meters do not necessarily use S&W content in determining net oil volume. In practice, Coriolis meters may be used at the outlet of a separator. It may not be feasible to use a composite sampling system at the outlet of a separator due to high separator pressure, thus effectively precluding the use of a PD meter at that location. This is because the lack of a composite sampling system would eliminate the ability to determine S&W content through the traditional centrifuge procedures proposed in § 3174.6(b)(6). Without the ability to accurately determine S&W content, proposed § 3174.9(e)(9) would require operators to report the S&W content as zero, should they choose to use a CMS at the outlet of a separator. The BLM may consider a variance to use other methods to determine S&W content should acceptable technology or processes be proposed in the future. However, the BLM would only approve an alternate method of S&W determination if resulting overall measurement uncertainty was within the limits proposed in § 3174.3(a).

Proposed § 3174.9 paragraphs (e)(9), (10), and (11) would parallel the meter proving connections, back-pressure valve, and check valve requirements for LACT systems.

Proposed § 3174.10(a) would establish a minimum pulse resolution (*i.e.,* the increment of total volume that can be individually recognized, measured in pulse per unit volume) of 8,400 pulses per barrel for CMSs. Because this resolution is standard for PD meters, and is accepted by the BLM, the same standard would apply to CMSs. The BLM originally considered a minimum pulse resolution of 10,000 pulses per barrel; however, this was reduced to 8,400 pulses per barrel based on comments received in response to the public meeting held on April 24 and 25, 2013 (see comments at the end of the discussion on major proposed changes).

Proposed § 3174.10 paragraphs (b), (c), (d), and (e) would establish minimum standards for the specifications for a specific make, model, and size of a Coriolis meter. The specifications would allow the BLM to determine the overall measurement uncertainty of the CMS to ensure that it meets the requirements of proposed § 3174.3(a). The specifications would also help ensure that the meters are properly installed, require that the BLM be notified of any changes to any of the internal calibration factors, and require a non-resettable totalizer for registered volume.

Proposed § 3174.10(f) would require verification of the meter zero reading before proving the meter or any time the AO requests it. This would be accomplished by shutting off the flow and observing the flow rate indicated by the CMS. If the indicated flow rate is within the manufacturer's specifications for zero stability, then the zero error would be accounted for in the uncertainty calculation and no adjustments would be required. However, if the indicated flow rate was outside the manufacturer's specification for zero stability, the meter's zero reading would be required to be adjusted.

Proposed § 3174.10(g) would establish the method by which a CMS determines net oil volume on which royalty is due. Most CMSs include advanced software features that can automatically calculate net oil volume. However, in order to allow the BLM to independently re-calculate net oil volume, the proposed provision would establish a calculation method similar to that used for PD meters. This would allow for manual re-calculation and verification by the BLM, without relying on algorithms internal to the CMS.

Proposed § 3174.10(h) would allow the API oil gravity to be determined by using one of two methods: (a) Directly from the average density measured by the Coriolis meter; or (b) A sample taken from a composite sample container. This would accommodate situations in which it is not feasible to install a composite sampling system due to economic or operating constraints. The BLM recognizes that high amounts of water in the oil would affect the average density determined by the Coriolis meter, which could in turn affect the value of the oil used to determine royalty due. However, because the BLM would not allow an S&W adjustment in situations where a composite sampling system was not used, we believe the increase in the measured and reported volume on which royalty is due would offset any value reductions due to the water content. The operator would determine whether to install a composite sampling system. The BLM specifically seeks comments on this proposed approach.

Proposed § 3174.10 paragraphs (i), (j), and (k) would establish minimum requirements for the information that the operator would need to maintain on-site, information that must be retained for an audit trail, and requirements for protecting the retained data in the CMS unit's memory. This information is necessary for the BLM to ensure compliance with these regulations and conduct production audits.

§ 3174.11 Meter Proving Requirements

Proposed § 3174.11 paragraphs (a) and (b) would establish that a meter would not be eligible to be used for royalty determination unless it is proven by the standards detailed in this proposed rule. A summary table is provided of the minimum standards for proving FMP meters and their applicable section reference.

Proposed § 3174.11(c) would establish the acceptable types of provers that could be used to prove a LACT or CMS.

Proposed § 3174.11 paragraphs (c)(1), (2), and (3) would describe and detail the requirements for acceptable meter provers, which include the master meters and displacement provers that are currently allowed under Order 4. (A meter prover is a device that verifies a meter's accuracy.) Coriolis master meters have been added, which were not addressed in Order 4. The BLM believes that Coriolis technology has advanced to the point where Coriolis meters can meet the accuracy requirements required for master meters. The proposed rule would not allow tank-provers to be used as an acceptable device for proving a meter. According to API standards, tank-provers are not recommended for viscous liquids, which include most crude oil. Because there are few tank-provers currently in use on Federal and Indian leases, this requirement is not expected to result in a significant cost to industry.

Proposed § 3174.11(c)(4) would establish displacement prover sizing standards. These standards would ensure that fluid velocity within the prover is within the limits recommended by API MPMS Chapter 4.2.4.3.4. Displacement velocities that are too low (prover is oversized) can result in unacceptable pressure and flow-rate changes and higher uncertainty due to possible displacement device ''chatter.'' Displacement velocities that are too high (prover is undersized) can cause damage to the components of the prover.

Proposed § 3174.11(d)(1) would expand on the current Order 4 requirement to prove the meter under ''normal'' operating conditions. This section would define limits of flow rate, pressure, and API oil gravity that must exist during the proving to be considered the ''normal'' operating condition. The BLM proposes to add this requirement because the BLM realizes that the meter factor can change with changes in these parameters. For example, a meter factor determined at an abnormally low flow rate may not represent the meter factor at a higher flow rate where the meter normally operates. This proposed section would also require a multi-point meter proving if the LACT or CMS were subject to highly variable conditions. The multi-point meter proving would establish three meter factors; one at the low end of the normal operating range, one at the midpoint, and one at the high end. An appropriate meter factor would then be applied according to proposed § 3174.11(d)(6).

Proposed § 3174.11 paragraphs (d)(2) through (5) would provide the details for minimum proving requirements, such as requiring a minimum proving pulse resolution of 10,000 pulses per proving run or requiring the use of pulse interpolation, if this cannot be met, and setting a requirement to continue repeating proving runs until the calculated meter factor from five consecutive runs is within a 0.05 percent tolerance between the highest and lowest value. The new meter factor would be the arithmetic average of the five meter factors from the five consecutive proving runs. This section also would require the meter factors to be calculated following the sequence described in API MPMS Chapter 12.2.3.

Proposed § 3174.11(d)(6) would allow two methods of incorporating multiple meter factors that would be required under proposed § 3174.11(d)(1)(iv). The first method would be to combine the meter factors into a single arithmetic average. The second method would be to curve-fit the meter factors and incorporate a real-time dynamic meter factor into the flow computer (this would apply primarily to CMS). Neither multi-point provings nor multi-point meter factors are discussed in Order 4. Please specifically comment on proposed § 3174.11 paragraphs (d)(1)(iv) and (d)(6) regarding how to handle meter factor determinations when the LACT or CMS experiences highly variable flow rates, pressures, or API oil gravities.

Proposed § 3174.11 paragraphs (d)(7) and (8) would set the minimum and maximum values that would be allowed for a meter factor, both between meter provings and for initial meter factors for newly installed or repaired meters. These meter factor ranges are not changed from Order 4.

Proposed § 3174.11(d)(9) would allow back-pressure valve adjustment after proving only within the normal operating fluid flow rate and fluid pressure as prescribed in proposed § 3174.11(d)(1). If the back-pressure valve is adjusted after proving, the ''as left'' fluid flow rate and fluid pressure would have to be documented on the proving report. The BLM is proposing this requirement because the BLM has observed this practice frequently in certain areas of the country and has observed that a change in back-pressure outside the proving conditions does, in some cases, affect the meter factor and results in operators reporting incorrect volumes. Allowing back-pressure valve adjustment after proving would not be intended as a means to circumvent the displacement prover minimum and maximum velocity requirements of proposed § 3174.11(c)(4). Order 4 has no specific requirements relating to the adjustment of the back-pressure valve after proving.

Proposed § 3174.11(d)(10) would set standards for the pressure used to calculate a CPL for a composite meter factor for LACTs. It would also prohibit the use of a composite meter factor for Coriolis meters because they have the capability to use a true average pressure over the measurement ticket period in the calculation of an average CPL. The use of a composite meter factor is intended to make measurement tickets easier to complete because the CPL is already included in the meter factor. This is typically not an issue with a Coriolis meter because of the advanced capability of the flow computer to which it is connected.

Proposed § 3174.11(e) contains a new provision for meter-proving requirements that were previously located in the LACT section of Order 4. This change would consolidate in one place all meter-proving requirements for both LACTs and CMSs. The proposal would change FMP meter-proving requirements for operators who run large volumes of oil through their meters. Currently, an FMP meter must be proven at least quarterly, unless total throughput exceeds 100,000 bbl per month, in which case the meter must be proven monthly. This proposal would require operators to prove an FMP meter each time the volume flowing through the meter, as measured on the non-resettable totalizer, increases by 50,000 bbl, or quarterly, whichever occurs first. This change to meter provings would affect approximately 5 percent of existing LACT systems nationwide, yet would ensure that meter-factor changes are corrected before large volumes of production are measured incorrectly, which could have an adverse impact on Federal or Indian royalty determinations.

The proposed 50,000 bbl threshold was determined by performing a statistical analysis to determine the volume at which the cost of proving the meter could be equal to the amount of potential royalty underpayment or overpayment that could occur, due to the difference in meter factors. This section also proposes to expand the current Order 4 requirement from proving after repair to proving any time after the mechanical or electrical components of the meter have been opened, changed, repaired, removed, exchanged, or reprogrammed.

Proposed § 3174.11(f) would not change Order 4 requirements for excess meter factor deviation and the required actions if proving reflects a deviation in meter factor that exceeds ±0.0025.

Proposed § 3174.11 paragraphs (g) and (h) would require that the temperature and pressure devices used as part of a LACT or CMS be verified as part of every proving. These sections would establish standards for the verification procedure and the test equipment used in the verification.

Proposed § 3174.11(i) would require verification of the density measurement function of the Coriolis meter under API MPMS Chapter 5.6.9.1.2.1 if measured density is used to determine API oil gravity (instead of a thermohydrometer, which is generally required under proposed § 3174.6(b)(4)). This would provide an independent verification that the Coriolis meter's density determination function is within the accuracy specifications for that meter.

Proposed § 3174.11(j) would prescribe meter-proving reporting requirements. This section would provide additional requirements for data that would need to be included on the meter-proving report beyond what is required under Order 4. One change would require operators to list the BLM-assigned FMP numbers on each proving report. Proposed § 3174.11 includes requirements for verification of the temperature average or RTD, verification of the pressure transducer, and density verification, as applicable, as well as any ''as left'' conditions after adjustment of the back-pressure valve that operators also would have to document on the proving report.

§ 3174.12 Measurement Tickets

Proposed § 3174.12 would specify the measurement ticket (run ticket) requirements that are currently in Order 3. The BLM believes that measurement ticket requirements are better suited to this proposed rule than to the rule that the BLM has proposed separately to replace Order 3, because this proposed rule specifies the requirements for the data that is recorded on oil measurement tickets. This section details the specific data requirements for measurement tickets based on which method of oil measurement is used, *i.e.,* manual tank gauging, LACT system, or CMS.

This rule proposes five changes to Order 3's current measurement-ticket requirements. One of those changes would require operators to list the BLM-assigned FMP numbers on each measurement ticket. This is to incorporate the new approval requirement for assigned FMPs included in the separately published proposed rule to replace Order 3. The second change would require operators to notify the BLM whenever they disagree with data documented on a measurement ticket. This is to allow the BLM to investigate the alleged discrepancy and potential impacts on Federal or Indian royalty determinations. The third change would require the operator, purchaser, or transporter, as appropriate, to fill out measurement tickets whenever a LACT system or CMS is proven and at least monthly. This would provide an audit trail for oil measured through a LACT system. The fourth change would allow the submission of electronic run tickets in lieu of paper run tickets. The fifth and final change would require the resetting of totalizers (accumulators) used to determine average pressure and average temperature whenever a measurement ticket is closed. This would ensure that the averages used for the calculation of CPL, CTL, and density only reflect the data measured and recorded since the opening of the measurement ticket.

§ 3174.13 Oil Measurement by Other Methods

Proposed § 3174.13(a) would provide that using any method of oil measurement other than manual tank gauging, LACT system, or CMS at an FMP would require BLM approval. Under proposed § 3174.13(b), the BLM would use the PMT as a central advisory body within the BLM to review and recommend approval of industry measurement technology not addressed in the proposed regulations. The PMT is made up of a panel of BLM employees who are oil and gas measurement experts.

The process outlined in proposed § 3174.13(b) for reviewing new equipment would allow the BLM to keep up with technology as it advances and approve its use without having to update its regulations. Under the proposed rule, if the PMT recommends, and the BLM approves, new equipment, the BLM would post the make, model, and range or software version on the BLM Web site *www.blm.gov* as being appropriate for use at an FMP for oil measurement going forward, *i.e.,* subsequent users of the technology would not have to go through the PMT process. The web posting identifying the equipment or technology would include, as appropriate, conditions of use.

The PMT would consider new measurement technologies on a case-by-case basis. Proposed § 3174.13(b) would identify the requirements for requesting approval of oil measurement by equipment other than equipment listed in this proposed rule. The BLM believes this process would be used as other technologies appear and their reliability is established. For example, the BLM considered other meters for inclusion in this proposed rule, such as turbine meters and ultrasonic meters; however, it ultimately decided not to include them in this rule because there is insufficient testing to validate their accuracy and reliability under all operating conditions at this time.

Proposed § 3174.13(c) would expressly provide that the procedures for requesting and granting a variance under § 3170.6 could not be used as an avenue for approving new technology or equipment. An operator could obtain approval of alternative oil measurement equipment or methods only through review, recommendation, and approval by the PMT under proposed § 3174.13.

§ 3174.14 Determination of Oil Volumes by Methods Other Than Measurement

Proposed § 3174.14 would not be a change from Order 4 requirements for determining volumes of oil that cannot be measured as a result of spillage or leakage. This section includes, but is not limited to, oil that is classified as slop or waste oil.

§ 3174.15 Immediate Assessments

Proposed § 3174.15 would identify certain acts of noncompliance that would be subject to immediate assessments. These actions subject to immediate assessment would be in addition to those identified in the current regulations at 43 CFR 3163.1(b). These assessments are not civil penalties and are separate from the civil penalties authorized in Section 109 of FOGRMA, 30 U.S.C. 1719.

Order 4 does not provide for immediate assessments in addition to those specified in 43 CFR 3163.1(b). However, the BLM continues to incur costs associated with correcting violations of lease terms and regulations. Accordingly, this proposed rule would add six new violations that would be subject to immediate assessments.

The authority for the BLM to impose these assessments was explained in the preamble to the final rule in which 43 CFR 3163.1 was originally promulgated in 1987:

> The provisions providing assessments have been promulgated under the Secretary of the Interior's general authority, which is set out in Section 32 of the Mineral Leasing Act of 1920, as amended and supplemented (30 U.S.C. 189), and under the various other mineral leasing laws. Specific authority for the assessments is found in Section 31(a) of the Mineral Leasing Act (30 U.S.C. 188(a), which states, in part ''. . . the lease may provide for resort to [sic] appropriate methods for the settlement of disputes or for remedies for breach of specified conditions thereof.'' All Federal onshore and Indian oil and gas lessees must, by the specific terms of their leases which incorporate the regulations by reference, comply with all applicable laws and regulations.
>
> Failure of the lessee to comply with the law and applicable regulations is a breach of the lease, and such failure may also be a breach of other specific lease terms and conditions. Under Section 31(a) of the Act and the terms of its leases, the BLM may go to court to seek cancellation of the lease in these circumstances. However, since at least 1942, the BLM (and formerly the Conservation Division, U.S. Geological Survey), has recognized that lease cancellation is too drastic a remedy, except in extreme cases. Therefore, a system of liquidated damages was established to set lesser remedies in lieu of lease cancellation. . . .
>
> The BLM recognizes that liquidated damages cannot be punitive, but are a reasonable effort to compensate as fully as possible the offended party, in this case the lessor, for the damage resulting from a breach where a precise financial loss would be difficult to establish. This situation occurs when a lessee fails to comply with the operating and reporting requirements. The rules, therefore, establish uniform estimates for the damages sustained, depending on the nature of the breach.

53 FR 5384, 5387 (Feb. 20, 1987).

All of the immediate assessments under this proposed rule would be set at $1,000 per violation. The BLM chose the $1,000 figure because it generally approximates what it would cost the agency to identify and document each of the violations in question and verify remedial action and compliance.

Change in Violation, Corrective Action, and Abatement Compliance

This proposal would remove the enforcement, corrective action, and abatement period provisions of Order 4. In their place the BLM will develop an internal handbook for inspection and enforcement. The handbook would provide direction to BLM inspectors on how to classify a violation—as major or minor—what corrective action should be applied, and what timeframes for correction should be applied. The handbook will be in place by the effective date of the final rule. The proposed rule would take the approach that a violation's severity and corrective action timeframes should be decided on a case-by-case basis, using the definitions in the regulations. In deciding how severe a violation is, BLM inspectors would take into account whether a violation could result in ''immediate, substantial, and adverse impacts on production accountability, or royalty income.'' (Definition of ''major violation'' 43 CFR 3160.0–5.) The AO would use the inspection and enforcement handbook in conjunction with 43 CFR subpart 3163, which provides for assessments and civil penalties when lessees and operators fail to remedy their violations in a timely fashion, and for immediate assessments for certain other violations. The BLM is asking the public to comment specifically on this proposal for dealing with violations and corrective actions, particularly the approach that a violation's severity and corrective action timeframes should be decided on a case-by-case basis as opposed to establishing a fixed schedule for penalties or corrective actions.

None of the changes proposed in this rule would in any way diminish existing enforcement authority.

Miscellaneous Changes to Other BLM Regulations in 43 CFR Part 3160

Because this proposed rule would replace Order 4, the BLM is proposing two related changes to provisions in 43 CFR part 3160.

1. Section 3162.7–2, Measurement of oil, would be rewritten to reflect this proposed rule.

2. Section 3164.1, Onshore Oil and Gas Orders, the table would be revised to remove the reference to Order 4.

V. Onshore Order Public Meetings, April 24–25, 2013

On April 24 and 25, 2013, the BLM held a series of public meetings to discuss draft proposed revisions to Orders 3, 4, and 5. The meetings were webcast so tribal members, industry, and the public across the country could participate and ask questions either in person or over the Internet. Following the forum, the BLM opened a 36-day informal comment period, during which 13 comment letters were submitted. The following summarizes comments relating to Order 4:

1. Electronic run tickets. The BLM received numerous comments suggesting that electronic run tickets should be allowed in lieu of paper run tickets in order to accommodate paperless transactions. The BLM agrees with this comment and has added language to the proposed rule that would allow either paper or electronic records to be submitted, as long as certain requirements are met.

2. Automatic tank gauging. Several comments suggested that the BLM include automatic tank gauging as an accepted method of measuring oil sold from tanks because manual tank gauging requires opening the thief hatch, thereby releasing vapors into the atmosphere and exposing personnel to potentially dangerous vapor inhalation and fire hazards. The BLM considered adding provisions for automatic tank gauging in the proposed rule, including the incorporation by reference of API MPMS Chapter 3, Section 1B, ''Standard Practice for Level Measurement of Liquid Hydrocarbons in Stationary Tanks by Automatic Tank Gauging,'' Second Edition, June 2001. However, because the BLM has not seen any test data to confirm that their certainty, bias, and verifiability would meet the specific measurement performance objectives in proposed § 3174.3, or the accuracy standards for manual tank gauging in proposed § 3174.6(b)(5)(iii), the BLM did not include an automatic tank gauging provision in the proposed rule. In order to more fully understand the issues surrounding automatic tank gauging, the BLM is specifically asking the public to comment on this issue and provide test and field data demonstrating that automatic tank gauging would meet or exceed the proposed standards for manual tank gauging. If the BLM decides to include automatic tank gauging in the final rule, we may also consider approvals of specific types of equipment, including the makes, models, and sizes for which test data demonstrate their ability to meet the BLM's minimum standards.

3. Modifications to existing LACTs. One comment suggested that existing LACTs using automatic temperature/gravity compensators should be exempt from the proposed requirement that prohibits their use (proposed § 3174.7(g)). The BLM did not accept this suggestion because the estimated number of existing LACTs at FMPs that are equipped with automatic temperature/gravity compensators is small, but the potential for lost royalty could be significant. Absent further information to the contrary, the BLM believes that retrofitting these LACTs to conform to the proposed rule would not be a significant cost burden to operators.

4. Coriolis Meters. The BLM received one comment suggesting that the minimum pulse output for a Coriolis meter should be 8,400 pulses per barrel, not 10,000 pulses per barrel as presented at the meeting. The reason given is that, especially for high-volume meters, a pulse output of 10,000 pulses per barrel could exceed the maximum frequency output of the Coriolis meter or the frequency input for the tertiary device. The BLM agrees and has incorporated this suggestion into the proposed rule.

5. CMS non-resettable totalizer. The BLM received one comment objecting to the requirement for a non-resettable totalizer on a CMS for volume at metered conditions because the flow computer on a CMS will automatically calculate corrected volume using the meter factor, CPL, and CTL. While the BLM agrees that the calculation of corrected oil volume at standard conditions is possible with a flow computer, the BLM requires access to the raw values going into the calculation for the purpose of independent verification. No changes to the proposed rule were made as a result of this comment.

6. Uncertainty limits—high volume. One commenter suggested that the proposed uncertainty limit for high-volume oil measurement of ±0.35 percent (proposed § 3174.3(a)(1)) is too restrictive and, instead, should be based on published API documents. As explained above, the BLM believes that the ±0.35 percent uncertainty in the proposed rule is reasonable, based on the BLM's experience with current equipment capabilities and industry standard practices and procedures. The BLM would consider changing this limit if specific data and uncertainty analyses were presented in the comments to this proposed rule that support the use of a different value.

7. Uncertainty limits—low volume. Another commenter suggested that the BLM should establish a third uncertainty tier of ±3 percent for very low volumes of less than 500 barrels per month. The BLM agrees with the premise of this suggestion; however, upon review of uncertainty data, the BLM is proposing a third uncertainty tier of ±2.5 percent for low volumes of less than 100 barrels per month. Data indicates that for a typical 400 bbl tank measuring by manual tank gauging, the uncertainty level increases as lower volumes of oil are removed, achieving the highest uncertainty level of ±2.5 percent. Based on current information, the BLM believes that an uncertainty level of ±2.5 percent and a less than 100 bbl per month threshold to be achievable without additional investment, and that attempts to achieve a lower uncertainty standard could become uneconomic for a typical low-volume operation. The BLM is interested in comments and data related to this proposed uncertainty level and volume threshold.

8. Meter proving frequency. The BLM received one comment objecting to the proposed requirement of a LACT/CMS proving frequency every 50,000 barrels or quarterly, whichever is more frequent. However, the objection was based on coordination with the pipeline company that may own the meter, not on the lack of need to perform the proving. Because no data was submitted to justify a different frequency, we did not change the proposed requirement. While the BLM would consider a different proving frequency, it would have to be justified by specific data submitted during the public comment period for this rule. The proposed rule was not revised as a result of this comment.

9. Allocation meters. The BLM received one comment suggesting that the BLM should establish less rigid standards for allocation meters. The BLM did not change the proposed rule based on this comment. Inaccurate or unverifiable measurement will affect royalty payment regardless of whether the measurement is used to determine a percentage of a commingled measurement (allocation) or is used directly to determine royalty-bearing volume and quality. The proposed rule was not revised based on this comment.

10. Vapor-tight tanks. The BLM received one comment objecting to the cost of maintaining vapor-tight tanks. Although the existing Order 4 does not explicitly require vapor-tight tanks, the requirement of a pressure-vacuum thief hatch or vent line valve implies that other components of the tank must be vapor tight. The proposed rule would clear up this ambiguity. The BLM does not believe that this is a change from the existing requirement in Order 4 that tanks must be vapor-tight. The BLM did not make any changes to the proposed rule based on this comment.

11. LACT/CMS run tickets. The BLM received one comment suggesting that run tickets generated for oil volume measured by LACT or CMS be prepared monthly, not every time the LACT or CMS was activated. The BLM agrees with this comment. A run ticket would be opened at the beginning of every calendar month and whenever a meter proving was conducted.

VI. Procedural Matters

Executive Orders 12866 and 13563, Regulatory Planning and Review

Executive Order 12866 provides that the Office of Information and Regulatory Affairs (OIRA) will review all significant rules. The OIRA has determined that this rule is significant because it would raise novel legal or policy issues.

Executive Order 13563 reaffirms the principles of E.O. 12866 while calling for improvements in the nation's regulatory system to promote predictability, to reduce uncertainty, and to use the best, most innovative, and least burdensome tools for achieving regulatory ends. The executive order directs agencies to consider regulatory approaches that reduce burdens and maintain flexibility and freedom of choice for the public where these approaches are relevant, feasible, and consistent with regulatory objectives. E.O. 13563 emphasizes further that regulations must be based on the best available science and that the rulemaking process must allow for public participation and an open exchange of ideas. The BLM has developed this rule in a manner consistent with these requirements.

Regulatory Flexibility Act

The BLM certifies that this proposed rule would not have a significant economic effect on a substantial number of small entities as defined under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*). The Small Business Administration (SBA) has developed size standards to carry out the purposes of the Small Business Act and those size standards can be found at 13 CFR 121.201. Small entities for mining, including the extraction of crude oil and natural gas, are defined by the SBA as an individual, limited partnership, or small company considered being at ''arm's length'' from the control of any parent companies, with fewer than 500 employees.

Of the 6,628 domestic firms involved in onshore oil and gas extraction, 99 percent (or 6,530) had fewer than 500 employees. There are another 10,160 firms involved in drilling and other support functions. Of the firms providing support functions, 99 percent of those firms had fewer than 500 employees. Based on this national data, the preponderance of firms involved in developing oil and gas resources are small entities as defined by the SBA. As such, it appears a number of small entities potentially could be affected by this proposed rule. Using the best available data, the BLM estimates there are approximately 3,700 lessees/operators conducting oil operations on Federal and Indian lands that could be affected by this rule.

In addition to determining whether a number of small entities are likely to be affected by this rule, the BLM must also determine whether the rule is anticipated to have a significant economic impact on those small entities. On an ongoing basis, we estimate the proposed changes to the LACT meter proving frequency requirements based on volume throughput would increase the regulated community's annual costs by less than $258,000, and would affect approximately 74 of the highest-volume LACT systems. In addition, there would be a one-time cost to retrofit 20 percent of existing LACT systems of about $1.4 million, or a one-time average cost of about $4,000 to approximately 346 existing LACT systems. New paperwork requirements would also increase operators' one-time costs by about $700,000 for submitting revised tank calibration tables to the BLM. New annual paperwork costs would amount to about $300,000. All of the proposed provisions would apply to entities regardless of size. However, entities with the greatest activity would likely experience the greatest increase in compliance costs.

Based on the available information, we conclude that the proposed rule would not have a significant impact on a substantial number of small entities. Therefore, a final Regulatory Flexibility Analysis is not required, and a Small Entity Compliance Guide is not required.

Small Business Regulatory Enforcement Fairness Act

This proposed rule is not a major rule under 5 U.S.C. 804(2), the Small Business Regulatory Enforcement Fairness Act. This rule would not have an annual effect on the economy of $100 million or more. As explained under the preamble discussion concerning Executive Order 12866, Regulatory Planning and Review, proposed changes to Order 4, Measurement of Oil, would increase, by about $558,000 annually, the cost associated with the development and production of crude oil resources under Federal and Indian oil and gas leases. There would also be a one-time cost estimated to be $2.1 million.

This rule proposes to replace Order 4 to ensure that crude oil produced from Federal and Indian oil and gas leases is accurately measured and accounted for. Based on the cost figures above, the estimated annual increased cost to each entity that produces oil from all Federal and Indian leases for implementing these changes would be about $150 per year, and a one-time average cost of about $570 per entity for the estimated 3,700 lessees/operators conducting operations on Federal or Indian leases.

This proposed rule:

- Would not cause a major increase in costs or prices for consumers, individual industries, Federal, State, tribal, or local government agencies, or geographic regions; and
- Would not have significant adverse effects on competition, employment, investment, productivity, innovation, or the ability of U.S.-based enterprises to compete with foreign-based enterprises.

Unfunded Mandates Reform Act

In accordance with the Unfunded Mandates Reform Act (2 U.S.C. 1501 *et seq.*), the BLM finds that:

- This proposed rule would not ''significantly or uniquely'' affect small governments. A Small Government Agency Plan is unnecessary.

- This proposed rule would not produce a Federal mandate of $100 million or greater in any single year.

The proposed rule is not a ''significant regulatory action'' as it would not require anything of any non-Federal governmental entity.

Executive Order 12630, Governmental Actions and Interference With Constitutionally Protected Property Rights (Takings)

Under Executive Order 12630, the proposed rule would not have significant takings implications. A takings implication assessment is not required. This proposed rule would establish the minimum standards for accurate measurement and proper reporting of oil produced from Federal and Indian leases, unit PAs, and CAs, by providing a system for production accountability by operators and lessees. All such actions are subject to lease terms which expressly require that subsequent lease activities be conducted in compliance with applicable Federal laws and regulations. The proposed rule conforms to the terms of those Federal leases and applicable statutes, and as such the proposed rule is not a governmental action capable of interfering with constitutionally protected property rights. Therefore, the proposed rule would not cause a taking of private property or require further discussion of takings implications under this Executive Order.

Executive Order 13132, Federalism

In accordance with Executive Order 13132, the BLM finds that the proposed rule would not have significant Federalism effects. A Federalism assessment is not required. This proposed rule would not change the role of or responsibilities among Federal, State, and local governmental entities. It does not relate to the structure and role of the States and would not have direct, substantive, or significant effects on States.

Executive Order 13175, Consultation and Coordination With Indian Tribal Governments

Under Executive order 13175, the President's memorandum of April 29, 1994, ''Government-to-Government Relations with Native American Tribal Governments'' (59 FR 22951), and 512 Departmental Manual 2, the BLM evaluated possible effects of the proposed rule on federally recognized Indian tribes. The BLM approves proposed operations on all Indian onshore oil and gas leases (except Osage Tribe). Therefore, the proposed rule has the potential to affect Indian tribes. In conformance with the Secretary's policy on tribal consultation, the BLM held three tribal consultation meetings to which more than 175 tribal entities were invited. The consultations were held in:

- Tulsa, Oklahoma on July 11, 2011;
- Farmington, New Mexico on July 13, 2011; and
- Billings, Montana on August 24, 2011.

In addition, the BLM hosted a tribal workshop and webcast in Washington, DC on April 24, 2013.

The purpose of these meetings was to solicit initial feedback and preliminary comments from the tribes. Comments from the tribes will continue to be accepted and consultation will continue as this rulemaking proceeds. To date, the tribes have expressed concerns about the subordination of tribal laws, rules, and regulations to the proposed rule; representation on the DOI GOMT; and the BLM's Inspection and Enforcement program's ability to enforce the terms of this proposed rule. While the BLM will continue to address these concerns, none of the concerns expressed relate to or affect the substance of this proposed rule.

Executive Order 12988, Civil Justice Reform

Under Executive Order 12988, the Office of the Solicitor has determined that the proposed rule would not unduly burden the judicial system and meets the requirements of Sections 3(a) and 3(b)(2) of the Executive Order. The Office of the Solicitor has reviewed the proposed rule to eliminate drafting errors and ambiguity. It has been written to minimize litigation, provide clear legal standards for affected conduct rather than general standards, and promote simplification and burden reduction.

Executive Order 13352, Facilitation of Cooperative Conservation

Under Executive Order 13352, the BLM has determined that this proposed rule would not impede facilitating cooperative conservation and would take appropriate account of and consider the interests of persons with ownership or other legally recognized interests in land or other natural resources. This rulemaking process will involve Federal, tribal, State, and local governments, private for-profit and nonprofit institutions, other nongovernmental entities and individuals in the decision-making via the public comment process. That process would provide that the programs, projects, and activities are consistent with protecting public health and safety.

Paperwork Reduction Act

I. Overview

The Paperwork Reduction Act (PRA) (44 U.S.C. 3501–3521) provides that an agency may not conduct or sponsor, and a person is not required to respond to, a ''collection of information,'' unless it displays a currently valid OMB control number. Collections of information include any request or requirement that persons obtain, maintain, retain, or report information to an agency, or disclose information to a third party or to the public (44 U.S.C. 3502(3) and 5 CFR 1320.3(c)). This proposed rule contains information collection requirements that are subject to review by OMB under the PRA. In accordance with the PRA, the BLM is inviting public comments on proposed new information collection requirements for which the BLM is requesting a new OMB control number.

After promulgating a final rule and receiving approval from the OMB (in the form of a new control number), the BLM intends to ask OMB to combine the activities authorized by the new control number with existing control number 1004–0137, Onshore Oil and Gas Operations (expiration date January 31, 2018).

The information collection activities in this proposed rule are described below along with estimates of the annual burdens. These activities, along with annual burden estimates, do not include activities that are considered usual and customary industry practices. Included in the burden estimates are the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing each component of the proposed information collection requirements.

The information collection request for this proposed rule has been submitted to OMB for review under 44 U.S.C. 3507(d). A copy of the request can be obtained from the BLM by electronic mail request to Jennifer Spencer at *j35spenc@blm.gov* or by telephone request to 202–912–7146. You may also review the information collection request online at *http://www.reginfo.gov/public/do/PRAMain*.

The BLM requests comments on the following subjects:

1. Whether the collection of information is necessary for the proper functioning of the BLM, including whether the information will have practical utility;
2. The accuracy of the BLM's estimate of the burden of collecting the information, including the validity of the methodology and assumptions used;

3. The quality, utility, and clarity of the information to be collected; and

4. How to minimize the information collection burden on those who are to respond, including the use of appropriate automated, electronic, mechanical, or other forms of information technology.

If you want to comment on the information collection requirements of this proposed rule, please send your comments directly to OMB, with a copy to the BLM, as directed in the **ADDRESSES** section of this preamble. Please identify your comments with ''OMB Control Number 1004–XXXX.'' OMB is required to make a decision concerning the collection of information contained in this proposed rule between 30 to 60 days after publication of this document in the **Federal Register.** Therefore, a comment to OMB is best assured of having its full effect if OMB receives it by October 30, 2015.

II. Summary of Proposed Information Collection Requirements

Title: Measurement of Oil.

OMB Control Number: Not assigned. This is a new collection of information.

Description of Respondents: Holders of Federal and Indian (except Osage Tribe) oil and gas leases, operators, purchasers, transporters, and any other person directly involved in producing, transporting, purchasing, or selling, including measuring, oil or gas through the point of royalty measurement or the point of first sale.

Respondents' Obligation: Required to obtain or retain a benefit.

Frequency of Collection: On occasion.

Abstract: The proposed rule includes new information collection requirements that are necessary in order to update the BLM's regulations on measurement of oil produced from Federal and Indian (except Osage Tribe) onshore oil and gas leases, and from units or communitized areas that include Federal or Indian leases.

Estimated Total Annual Burden Hours: The proposed rule would result in an estimated 26,290 responses and 14,696 burden hours annually.

III. Proposed Information Collection Requirements

Proposed § 3174.5(c) would require submission of tank calibration tables to the BLM within 30 days after calibration. This provision would ensure that BLM personnel would have the latest tables when conducting inspections or audits.

Proposed § 3174.7(e)(1) would require the operator to notify the BLM within 24 hours of any LACT system failures or equipment malfunctions which may have resulted in measurement error.

Proposed § 3174.10(d) would require the operator to notify the BLM within 24 hours of any changes to any Coriolis meter internal calibration factors.

Proposed § 3174.10(i), (j), and (k) would establish minimum requirements for the information about Coriolis Measurement Systems (CMSs) that the operator would need to maintain on-site, information that must be retained for an audit trail, and requirements for protecting the retained data in the CMS unit's memory. This information is necessary for the BLM to ensure compliance with these regulations and conduct production audits.

Proposed § 3174.11(c) would require the operator to have available on-site, for review by the BLM, a valid certificate of calibration for the meter prover that is used to determine the meter factor.

Proposed 3174.11(j) would require the operator to provide a meter proving report no later than 14 days after a meter proving. The following information would be required:

- All meter-proving and volume adjustments after any LACT system or CMS malfunction;
- FMP number;
- Lease number, CA number, or unit PA number;
- The temperature from the test thermometer and the temperature from the temperature averager or tertiary device;
- For CMS, the pressure applied by the pressure test device and the pressure reading from the tertiary device at the three points required under paragraph (h)(3) of this section; and
- The ''as left'' fluid flow rate and fluid pressure, if the back-pressure valve is adjusted after proving.

Proposed 3174.13 would require prior BLM approval for any method of oil measurement other than manual tank gauging, LACT system, or CMS at a Facility Measurement Point. Any operator requesting approval to use alternative oil measurement equipment would be required to submit to the BLM:

- Performance data;
- Actual field test results;
- Laboratory test data; or
- Any other supporting data or evidence that demonstrates that the proposed alternative oil measurement equipment would meet or exceed the objectives of the applicable minimum requirements at proposed subpart 3174 and would not affect royalty income or production accountability.

IV. Burden Estimates

The following table details the information elements and respective annual hour burdens of the request for a new control number:

A. Type of response	B. Number of responses	C. Hours per response	D. Total hours
Tank Calibration Tables (43 CFR 3174.5(c))	22,000	0.5	11,000
Notification of LACT System Failure (43 CFR 3174.7(e)(1))	100	1	100
Notification of Changes to Internal Meter Calibration Factors (43 CFR 3174.10(d))	10	1	10
Requirements for Coriolis Measurement Systems (43 CFR 3174.10(i), (j), and (k))	2,200	1	2,200
Meter Prover Calibration Certification Documentation (43 CFR 3174.11(c))	985	0.5	493
Meter Proving Reports (43 CFR 3174.11(j))	985	0.5	493
Oil Measurement by Other Methods (43 CFR 3174.13)	10	40	400
Totals	26,290	....	14,696

National Environmental Policy Act (NEPA)

The BLM has prepared a draft environmental assessment (EA) that concludes that this proposed rule would not have a significant impact on the quality of the environment under NEPA, 42 U.S.C. 4332(2)(C), therefore a detailed statement under NEPA is not required. A copy of the draft EA can be viewed at *www.regulations.gov* (use the search term 1004–AE16, open the Docket Folder, and look under Supporting Documents) and at the address specified in the **ADDRESSES** section.

The proposed rule would not impact the environment significantly. For the most part, the proposed rule would in substance update the provisions of Order 4 and would involve changes that are of an administrative, technical, or procedural nature that would apply to the BLM's and the lessee's or operator's administrative processes. For example, the proposed rule would update the step-by-step procedure required by the BLM for performing tank gauging operations. The rule would also establish new requirements for the specific types of information that should be included in a measurement ticket that must be submitted to the BLM after performing oil measurement operations. Additionally, the rule would establish new standards for meters, including an increased proving frequency established by the BLM. These changes will enhance the agency's ability to account for the oil and gas produced from Federal and Indian lands, but should have minimal to no impact on the environment. Some of these proposed standards, such as those associated with proposed new standards for storage tanks, LACT systems, and meter-proving, may result in increased human presence and traffic on existing disturbed surfaces, but these activities are expected to have a negligible impact on the quality of the human environment, as discussed in the draft EA. We will consider any new information we receive during the public comment period for the proposed rule that may inform our analysis of the potential environmental impacts of the rule.

Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

Although this proposed rule would amend the BLM's oil production regulations, it would not have a substantial direct effect on the nation's energy supply, distribution, or use, including a shortfall in supply or price increases. Changes in this proposed rule would strengthen the BLM's accountability requirements for operators holding Federal and Indian oil leases. As discussed previously, these changes would increase recordkeeping requirements and establish national requirements for operators who wish to use CMSs. All of the changes would increase the regulated community's annual costs by about $558,000, or about $150 per entity per year.

We expect that the proposed rule would not result in a net change in the quantity of oil that is produced from Federal and Indian leases.

Information Quality Act

In developing this proposed rule, we did not conduct or use a study, experiment, or survey requiring peer review under the Information Quality Act (Pub. L. 106–554, Appendix C Title IV, 515, 114 Stat. 2763A–153).

Clarity of the Regulations

Executive Order 12866 requires each agency to write regulations that are simple and easy to understand. We invite your comments on how to make these proposed regulations easier to understand, including answers to questions such as the following:

1. Are the requirements in the proposed regulations clearly stated?
2. Do the proposed regulations contain technical language or jargon that interferes with their clarity?
3. Does the format of the proposed regulations (grouping and order of sections, use of headings, paragraphing, etc.) aid or reduce their clarity?
4. Would the regulations be easier to understand if they were divided into more (but shorter) sections?
5. Is the description of the proposed regulations in the **SUPPLEMENTARY INFORMATION** section of this preamble helpful in understanding the proposed regulations? How could this description be more helpful in making the proposed regulations easier to understand?

Please send any comments you have on the clarity of the regulations to the address specified in the **ADDRESSES** section.

Authors

The principal authors of this proposed rule are Mike McLaren of the BLM Pinedale, Wyoming Field Office; Steve Klimetz of the U.S. Forest Service Region 8 Office, Atlanta, Georgia (formerly of the BLM); Tom Zelenka of the BLM New Mexico State Office; Chris DeVault from the BLM Montana State Office; Val Jamison of the BLM Farmington, New Mexico Field Office; assisted by Faith Bremner, BLM, Division of Regulatory Affairs, Washington Office; Mike Wade, BLM, Washington Office; Rich Estabrook, BLM, Washington Office; and Geoffrey Heath, Office of the Solicitor, Department of the Interior.

List of Subjects

43 CFR Part 3160

Administrative practice and procedure, Government contracts, Indians-lands, Mineral royalties, Oil and gas exploration, Penalties, Public lands—mineral resources, Reporting and recordkeeping requirements.

43 CFR Part 3170

Administrative practice and procedure, Immediate assessments, Incorporation by reference, Indians-lands, Mineral royalties, Oil and gas measurement, Public lands—mineral resources.

Dated: September 16, 2015.

Janice M. Schneider,

Assistant Secretary, Land and Minerals Management.

43 CFR Chapter II

For the reasons set out in the preamble, the Bureau of Land Management proposes to amend 43 CFR part 3160 and, as proposed to be added on July 13, 2015 (80 FR 40768), 43 CFR part 3170, as follows:

PART 3160—ONSHORE OIL AND GAS OPERATIONS

■ 1. The authority citation for part 3160 continues to read as follows:

Authority: 25 U.S.C. 396d and 2107; 30 U.S.C. 189, 306, 359, and 1751; and 43 U.S.C. 1732(b), 1733, and 1740.

■ 2. Revise § 3162.7–2 to read as follows:

§ 3162.7–2 Measurement of oil.

All oil removed or sold from a lease, communitized area, or unit participating area must be measured under subpart 3174 of this title. All measurement must be on the lease, communitized area, or unit from which the oil originated and must not be commingled with oil originating from other sources unless approved by the authorized officer under the provisions of subpart 3173 of this title.

§ 3164.1 [Amended]

■ 3. Amend § 3164.1(b) by removing the fourth entry in the table, Order No. 4, Measurement of Oil.

PART 3170—ONSHORE OIL AND GAS PRODUCTION

■ 4. The authority citation is added to part 3170, proposed to be added on July 13, 2015 (80 FR 40768), to read as follows:

Authority: 25 U.S.C. 396d and 2107; 30 U.S.C. 189, 306, 359, and 1751; and 43 U.S.C. 1732(b), 1733, and 1740.

■ 5. Add subpart 3174 to part 3170, proposed to be added on July 13, 2015 (80 FR 40768), to read as follows:

Subpart 3174—Measurement of Oil

Sec.

§ 3174.1 Definitions and acronyms.

(a) As used in this subpart, the term:

Barrel (bbl) means 42 standard United States gallons.

Base pressure means atmospheric pressure or the vapor pressure of the liquid at 60 °F, whichever is higher.

Base temperature means 60 °F.

Certificate of calibration means a document stating the base prover volume and other physical data required for the calibration of flow meters.

Composite meter factor means a meter factor corrected from normal operating pressure to base pressure. The composite meter factor is determined by proving operations where the pressure is considered constant during the measurement period between provings.

Configuration log means the list of constant flow parameters, calculation methods, alarm set points, and other values that are programmed into the flow computer in a Coriolis measurement system.

Coriolis meter means a device which by means of the interaction between a flowing fluid and oscillation of tube(s), measures mass flow rate and density. The Coriolis meter consists of sensors and a transmitter, which converts the output from the sensors to signals representing volume and density.

Coriolis measurement system (CMS) means a metering system using a Coriolis meter in conjunction with a tertiary device, pressure transducer, and temperature transducer in order to derive and report net oil volume. A CMS system provides real-time, on-line measurement of oil.

Displacement prover means a prover consisting of a pipe or pipes with known capacities, a displacement device, and detector switches, which sense when the displacement device has reached the beginning and ending points of the calibrated section of pipe. Displacement provers can be portable or fixed.

Event log means an electronic record of all exceptions and changes to the flow parameters contained within the configuration log that occur and have an impact on a quantity transaction record.

Gross standard volume means a volume of oil corrected to base pressure and temperature.

Innage gauging means the level of a liquid in a tank measured from the datum plate or tank bottom to the surface of the liquid.

Lease automatic custody transfer (LACT) system means a system of components designed to provide for the unattended custody transfer of oil produced from a lease, unit PA, or CA to the transporting carrier while providing a proper and accurate means for determining the net standard volume and quality, and fail-safe and tamper-proof operations.

Master meter prover means a positive displacement meter or Coriolis meter that is selected, maintained, and operated to serve as the reference device for the proving of another meter. A comparison of the master meter to the Facility Measurement Point (FMP) meter output is the basis of the master-meter method.

Meter factor means a ratio obtained by dividing the measured volume of liquid that passed through a prover or master meter during the proving by the measured volume of liquid that passed through the meter during the proving, corrected to base pressure and temperature.

Net standard volume means the gross standard volume corrected for quantities of non-merchantable substances such as sediment and water.

Opaque oil means oil exhibiting the ability to block the passage of light.

Outage gauging means the distance from the surface of the liquid in a tank to the reference gauge point of the tank.

Positive displacement meter means a meter that registers the volume passing through the meter using a system which constantly and mechanically isolates the flowing liquid into segments of known volume.

Quantity transaction record (QTR) means a report generated by CMS equipment that summarizes the daily and hourly gross standard volume calculated by the flow computer and the average or totals of the dynamic data that is used in the calculation of gross standard volume.

Registered volume means the uncorrected volume registered by the positive displacement meter in a LACT system or the Coriolis meter in a CMS. For a positive displacement meter, the registered volume is represented by the non-resettable totalizer on the meter head. For Coriolis meters, the registered volume is the uncorrected (without the meter factor) mass of liquid divided by the density.

Resistance thermal device (RTD) means a type of transducer that converts a physical temperature into an electrical resistance (ohms).

Tertiary device means, for a CMS, the flow computer and associated memory, calculation, and display functions.

Turbulent flow means a type of flow in which random eddying flow patterns are superimposed upon the general flow progressing in a given direction.

Unity means an amount taken as 1.0000.

(b) As used in this subpart part the following additional acronyms carry the meaning prescribed:

API RP means an American Petroleum Institute Recommended Practice.

API MPMS means American Petroleum Institute Manual of Petroleum Measurement Standards.

CPL means correction for the effect of pressure on a liquid.

CPS means correction for the effect of pressure on steel.

CTL means correction for the effect of temperature on a liquid.

CTS means correction for the effect of temperature on steel.

NIST means National Institute of Standards and Technology.

S&W means sediment and water.

§ 3174.2 General requirements.

(a) Oil may be stored only in tanks that meet the requirements of § 3174.5(b) of this subpart.

(b) Oil must be measured on the lease, unit, or CA, unless approval for off-lease measurement is obtained under §§ 3173.21 and 3173.22 of this part.

(c) Oil produced from a lease, unit PA, or CA may not be commingled with production from other leases, unit PAs, or CAs or non-Federal properties before the point of royalty measurement, unless prior approval is obtained under §§ 3173.14 and 3173.15 of this part.

(d) An operator must obtain a BLM-approved FMP number under §§ 3173.12 and 3173.13 of this part for each oil measurement facility where the measurement affects the calculation of the volume or quality of production on which royalty is owed (*i.e.,* oil tank used for manual tank gauging, LACT system, CMS, or other approved metering device).

(e) Except as provided in paragraph (f) of this section, all equipment used to measure the volume of oil for royalty purposes installed after [THE EFFECTIVE DATE OF THE FINAL RULE] must comply with the requirements of this subpart. Equipment used to measure oil for royalty purposes in use on [THE EFFECTIVE DATE OF THE FINAL RULE] must comply with the requirements of this subpart by [DATE 180 DAYS AFTER THE EFFECTIVE DATE OF THE FINAL RULE].

(f) Meters used for allocation under a commingling and allocation approval under 43 CFR 3173.14 are not required to meet the requirements of this subpart.

§ 3174.3 Specific measurement performance requirements.

(a) *Volume measurement uncertainty levels.* (1) The FMP must achieve the following uncertainty levels:

If the monthly volume averaged over the previous 12 months or the life of the FMP, whichever is shorter, is:	The overall volume measurement uncertainty must be within:
1. Greater than 10,000 bbl/month.	±0.35 percent.
2. Greater than 100 bbl/month and less than 10,000 bbl/month.	±1.0 percent.
3. Less than 100 bbl/month ..	±2.5 percent.

(2) Only a BLM State Director may grant an exception to the uncertainty levels prescribed in paragraph (a)(1) of this section, and only upon:

(i) A showing that meeting the required uncertainly level would involve extraordinary cost or unacceptable adverse environmental effects; and

(ii) Written concurrence of the BLM Director.

(b) *Bias.* The measuring equipment used for volume determination must achieve measurement without statistically significant bias.

(c) *Verifiability.* All FMP equipment must be susceptible to independent verification by the BLM of the accuracy and validity of all inputs, factors, and equations that are used to determine quantity or quality. Verifiability includes the ability to independently recalculate volume and quality based on source records.

(d) *Variances.* The Production Measurement Team (PMT) will make any determination under § 3170.6(a)(4) of this part regarding whether a proposed variance in measurement procedures meets or exceeds the objectives of this section.

§ 3174.4 Incorporation by reference.

(a) Certain material specified in paragraphs (b) and (c) of this section is incorporated by reference into this part with the approval of the Director of the **Federal Register** under 5 U.S.C. 552(a) and 1 CFR part 51. Operators must comply with all incorporated standards and material, as they are in effect as of the effective date of this section. All approved material is available for inspection at the Bureau of Land Management, Division of Fluid Minerals, 20 M Street SE., Washington, DC 20003, 202–912–7162, and at all BLM offices with jurisdiction over oil and gas activities. It is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030 or go to *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.* In addition, the material incorporated by reference is available from the sources of that material, identified in paragraphs (b) and (c) of this section, as follows:

(b) American Petroleum Institute (API), 1220 L Street NW., Washington, DC 20005; telephone 202–682–8000; API also offers free, read-only access to some of the material at *www.publications.api.org.*

(1) API Manual of Petroleum Measurement Standards (MPMS) Chapter 2, Section 2A, Measurement and Calibration of Upright Cylindrical Tanks by the Manual Tank Strapping Method, 1st Ed., February 1995, Reaffirmed February 2012 (''API 2.2A''), IBR approved for § 3174.5(c).

(2) API MPMS Chapter 3, Section 1A, Standard Practice for the Manual Gauging of Petroleum and Petroleum Products, 3rd Ed., August 2013 (''API 3.1A''), IBR approved for §§ 3174.5(b)(7) and 3174.6(b)(5).

(3) API MPMS Chapter 4, Section 1, Introduction, 3rd Ed., February 2005, Reaffirmed June 2014 (''API 4.1''), IBR approved for § 3174.11(d).

(4) API MPMS Chapter 4, Section 2, Displacement Provers, 3rd Ed., September 2003, Reaffirmed March 2011 (''API 4.2,'' and ''API 4.2, Eq. 12''), IBR approved for §§ 3174.11(c)(2) and 3174.11(c)(4).

(5) API MPMS Chapter 4, Section 5, Master-Meter Provers, 3rd Ed., November 2011 (''API 4.5''), IBR approved for § 3174.11(c)(1).

(6) API MPMS Chapter 4, Section 6, Pulse Interpolation, 2nd Ed., May 1999, Reaffirmed October 2013 (''API 4.6''), IBR approved for § 3174.11(d)(2).

(7) API MPMS Chapter 4, Section 9, Part 2, Methods of Calibration for Displacement and Volumetric Tank Provers, Determination of the Volume of Displacement and Tank Provers by the Waterdraw Method of Calibration, 1st Ed., December, 2005, Reaffirmed September 2010 (''API 4.9.2''), IBR approved for § 3174.11(c)(2).

(8) API MPMS Chapter 5, Section 6, Measurement of oil by Coriolis Meters, 1st Ed., October 2002, Reaffirmed November 2013 (''API 5.6,'' ''API 5.6.3.2(e),'' API 5.6.8.3,'' ''API 5.6.9.1.2.1,'' and ''API 5.6, Eq. 2''), IBR approved for §§ 3174.9(b), 3174.9(d), 3174.9(e)(1), 3174.10(c), 3174.10(f), 3174.11(i), and 3174.11(j).

(9) API MPMS Chapter 6, Section 1, Lease Automatic Custody Transfer (LACT) Systems, 2nd Ed., May 1991, Reaffirmed May 2012 (''API 6.1''), IBR approved for § 3174.7(a).

(10) API MPMS Chapter 7, Temperature Determination, 1st Ed., June 2001, Reaffirmed February 2012 (''API 7'' and ''API 7.1''), IBR approved for §§ 3174.6(b)(2), 3174.6(c)(1), and 3174.8(b)(11)(i).

(11) API MPMS Chapter 8, Section 1, Standard Practice for Manual Sampling of Petroleum and Petroleum Products, 4th Ed., October 2013, (''API 8.1''), IBR approved for § 3174.6(b)(3).

(12) API MPMS Chapter 9, Section 3, Standard Test Method for Density, Relative Density, and API Gravity of Crude Petroleum and Liquid Petroleum Products by Thermohydrometer Method, 3rd Ed., December 2012 (''API 9.3''), IBR approved for § 3174.6(b)(4).

(13) API MPMS Chapter 10 Section 4, Determination of Water and/or Sediment in Crude Oil by the Centrifuge Method (Field Procedure), 4th Ed., October 2013 (''API 10.4,'' ''10.4.9,'' and ''10.4.9.2''), IBR approved for §§ 3174.6(b)(6), 3174.6(b)(6)(i), 3174.6(b)(iii)(A), and 3174.6(b)(iii)(B).

(14) API MPMS Chapter 11, Section 1, Temperature and Pressure Volume Correction Factors for Generalized Crude Oils, Refined Products and Lubricating Oils, 2nd Ed., May 2004, including Addendum 1, September 2007, Reaffirmed August 2013 (''API 11.1''), IBR approved for §§ 3174.6(b)(10)(i), 3174.6(b)(10)(iii), 3174.6(b)(10)(v), and 3174.10(h)(2).

(15) API MPMS Chapter 12, Section 2, Part 1, Calculation of Petroleum Quantities Using Dynamic Measurement Methods and Volumetric Correction Factors, 2nd Ed., May 1995, Reaffirmed March 2014 (''API 12.2.1''), IBR approved for § 3174.10(h)(2).

(16) API MPMS Chapter 12, Section 2, Part 3, Calculation of Petroleum Quantities Using Dynamic Measurement Methods and Volumetric Correction Factors, Proving Report, 1st Ed., October 1998, Reaffirmed March 2009 (''API 12.2.3''), IBR approved for §§ 3174.11(d)(5) and 3174.11(j)(1).

(17) API MPMS Chapter 12, Section 2, Part 4, Calculation of Petroleum Quantities Using Dynamic Measurement Methods and Volumetric Correction

Factors, Calculation of Base Prover Volumes by the Waterdraw Method, 1st Ed., December, 1997, Reaffirmed March 2009 (''API 12.2.4''), IBR approved for § 3174.11(c)(3).

(18) API MPMS Chapter 18, Section 1, Measurement Procedures for Crude Oil Gathered From Small Tanks by Truck, 2nd Ed., April 1997, Reaffirmed February 2012 (''API 18.1''), IBR approved for § 3174.6(a).

(19) API MPMS Chapter 21, Section 2, Electronic Liquid Volume Measurement Using Positive Displacement and Turbine Meters, 1st Ed., June 1998, Reaffirmed August 2011 (''API 21.2,'' ''API 21.2.10,'' ''21.2.10.2,'' ''21.2.10.6,'' and ''API 21.2.9.2.13.2a''), IBR approved for §§ 3174.8(b)(11)(iii), 3174.10(g)(2), 3174.10(h)(2), 3174.10(j), 3174.10(j)(2), and 3174.10(j)(3).

(20) API Recommended Practice (RP) 12 R1, Setting, Maintenance, Inspection, Operation and Repair of Tanks in Production Service, 5th Ed., August 1997, Reaffirmed April 2008 (''API RP 12 R1''), IBR approved for § 3174.5(b)(1).

(21) API RP 2556, Correction Gauge Tables For Incrustation, 2nd Ed., August 1993, Reaffirmed August 2013 (''API RP 2556''), IBR approved for § 3174.5(c).

(c) American Society for Testing and Materials (ASTM), 100 Bar Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428; telephone 1–877–909–2786; *www.astm.org/Standard/index.shtml;* ASTM also offers free read-only access to the material at *www.astm.org/READINGLIBRARY/.*

(1) ASTM D–1250, Table 5A, Generalized Crude Oils Correction of Observed Gravity to API Gravity at 60° F, September 1980 (''ASTM Table 5A''), IBR approved for § 3174.6(b)(10)(i).

(2) ASTM D–1250, Table 6A, Generalized Crude Oils Correction of Volume to 60° F Against API Gravity at 60° F, September 1980 (''ASTM Table 6A''), IBR approved for §§ 3174.6(b)(10)(iii), 3174.6(b)(10)(v), and 3174.10(h)(2).

Note 1 to § 3174.4(b): You may also be able to purchase these standards from the following resellers: Techstreet, 3916 Ranchero Drive, Ann Arbor, MI 48108; telephone 734–780–8000; *www.techstreet.com/api/apigate.html;* IHS Inc., 321 Inverness Drive South, Englewood, CO 80112; 303–790–0600; *www.ihs.com;* SAI Global, 610 Winters Avenue, Paramus, NJ 07652; telephone 201–986–1131; *http://infostore.saiglobal.com/store/.*

§ 3174.5 Oil measurement by manual tank gauging—general requirements.

(a) *Measurement objective.* Oil measurement by manual tank gauging must accurately compute the total net standard volume of oil withdrawn from a properly calibrated sales tank by following the proper sequence of activities prescribed in § 3174.6 of this subpart to determine the quantity and quality of oil being removed.

(b) *Oil tank equipment.* (1) Each tank used for oil storage must meet the requirements of API RP 12 R1 (incorporated by reference, see § 3174.4).

(2) Each oil storage tank must be connected, maintained, and operated in compliance with §§ 3173.2, 3173.6, and 3173.7 of this part.

(3) All oil storage tanks, hatches, connections, and other access points must be vapor tight.

(4) Each oil storage tank, unless connected to a vapor recovery system, must have a pressure-vacuum relief valve installed at the highest point in the vent line or connection with another tank. Pressure-vacuum relief valves must provide for normal inflow and outflow venting at an outlet pressure that is less than the thief hatch exhaust pressure and at an inlet pressure that is greater than the thief hatch vacuum setting.

(5) All oil storage tanks must be clearly identified and have a unique number stenciled on the tank and maintained in a legible condition.

(6) Each oil storage tank associated with an approved FMP must be set and maintained level.

(7) Each oil storage tank associated with an approved FMP by tank gauging must be equipped with a distinct gauging reference point, with the height of the reference point stamped on a fixed bench-mark plate or stenciled on the tank near the gauging hatch and must be maintained in a legible condition, consistent with API 3.1A (incorporated by reference, see § 3174.4).

(c) *Sales tank calibrations.* The operator must accurately calibrate each oil storage tank associated with an approved FMP by tank gauging using API 2.2A and API RP 2556 (both incorporated by reference, see § 3174.4). The operator must:

(1) Determine sales tank capacities by tank calibration using actual tank measurements;

(i) The unit volume must be in barrels (bbl); and

(ii) The incremental height measurement must be in ⅛-inch increments;

(2) Recalibrate a sales tank if it is relocated, repaired, or the capacity is changed as a result of denting, damage, installation, removal of interior components, or other alterations; and

(3) Submit sales tank calibration charts (tank tables) to the AO within 30 days after calibration. Tank tables may be in paper or electronic format.

§ 3174.6 Oil measurement by manual tank gauging—procedures.

(a) The procedures for oil measurement by manual tank gauging from tanks with capacities of 1,000 bbl or less must comply with API 18.1 (incorporated by reference, see § 3174.4) as outlined in the following table and further described in paragraph (b) of this section. Tanks with capacities greater than 1,000 bbl must also comply as outlined in the following table and further described in paragraph (b) of this section.

Activity	Section reference
Isolate tank for at least 30 minutes.	3174.6(b)(1).
Determine opening oil temperature.	3174.6(b)(2).
Take upper, middle, and outlet samples.	3174.6(b)(3).
Determine observed API gravity.	3174.6(b)(4).
Take opening gauge.	3174.6(b)(5).
Determine S&W content.	3174.6(b)(6).
Break the seal and transfer the oil; then close the valve and reseal the tank.	3174.6(b)(7).
Determine closing oil temperature.	3174.6(b)(8).
Take closing gauge.	3174.6(b)(9).
Complete measurement ticket.	3174.6(b)(10).

(b) The operator must take the steps in the order prescribed in the following paragraphs to manually determine the quality and quantity of oil measured under field conditions at an FMP.

(1) *Isolate tank.* Isolate the tank for at least 30 minutes to allow contents to settle before proceeding with tank gauging operations. The tank isolating valves must be closed and sealed under § 3173.2 of this part.

(2) *Determine opening oil temperature.* Determination of the temperature of oil contained in a sales tank must comply with paragraphs (b)(2)(i) through (iv) of this section and API 7 (incorporated by reference, see § 3174.4).

(i) Glass thermometers must be clean, be free of mercury separation, and have a minimum graduation of 1.0° F.

(ii) Portable electronic thermometers must have a minimum graduation of 0.1° F and have an accuracy of ±0.5° F.

(iii) Suspend the cup-case thermometer assembly or portable electronic thermometer in the tank by immersing it at the approximate vertical center of the fluid column, not less than 12 inches from the shell of the tank, for the minimum immersion time prescribed in the following table (API 7, Table 6 (incorporated by reference, see § 3174.4)):

MINIMUM IMMERSION TIMES FOR OIL TEMPERATURE DETERMINATION

	Minimum Immersion Time		
	Portable Electronic Thermometer	Woodback Cup-Case Assembly	
API Gravity at 60° F	In-Motion*	In-Motion*	Stationary
>50	30 Seconds	5 Minutes	10 Minutes.
40–49	30 Seconds	5 Minutes	15 Minutes.
30–39	45 Seconds	12 Minutes	20 Minutes.
20–29	45 Seconds	20 Minutes	35 Minutes.
<20	75 Seconds	35 Minutes	60 Minutes.

* In-Motion means repeatedly raising and lowering the assembly 1 foot above and below the desired depth.

(iv) Record the temperature to the nearest 1.0° F for glass thermometers or 0.1° F for portable electronic thermometers.

(3) *Take oil samples.* Sampling of oil removed from an FMP tank must yield a representative sample of the oil and its physical properties and must comply with paragraphs (b)(3)(i) through (iii) of this section and API 8.1 (incorporated by reference, see § 3174.4).

(i) First, using a clean sampling thief, take an upper sample from the vertical center of the upper one-third of the fluid column. Transfer to a clean centrifuge tube a 100-part sample for 200-part (percent) centrifuge tubes or a 50-milliliter sample for 100-milliliter centrifuge tubes and cork the tube. Use the contents of the tube to determine sediment and water content under paragraph (b)(6) of this section.

(ii) Second, take a middle sample from the vertical center of the middle one-third of the fluid column to determine the observed API oil gravity and temperature. Immediately use this sample to determine oil gravity under paragraph (b)(4) of this section.

(iii) After determining observed API oil gravity, take an outlet sample with the inlet opening of the sample thief at the level of the bottom of the tank outlet. Transfer to a second clean centrifuge tube a 100-part sample for 200-part (percent) centrifuge tubes or a 50-milliliter sample for 100-milliliter centrifuge tubes and cork the tube. Use the contents of the tube to determine sediment and water content under paragraph (b)(6) of this section.

(4) *Determine observed oil gravity.* Tests for oil gravity must comply with paragraphs (b)(4)(i) through (iv) of this section and API 9.3 (incorporated by reference, see § 3174.4).

(i) The thermohydrometer must be calibrated for an oil gravity range that includes the observed gravity of the oil sample being tested and must be clean, with a clearly legible oil gravity scale and with no loose shot weights.

(ii) Slowly insert the thermohydrometer into the filled sample thief about 2 API gravity divisions below the expected settled position. Release with a slight spin.

(iii) Remove any air bubbles and allow the temperature to stabilize for at least 5 minutes.

(iv) Read and record the observed API oil gravity to the nearest 0.1 degree. For transparent liquids, read to the nearest scale division at the point on the scale at which the surface of the liquid cuts the scale. For opaque oil, read the scale at the top of the meniscus and deduct 0.1 degree gravity from the reading. Read and record the thermohydrometer temperature reading to the nearest 1.0° F.

(5) *Take opening gauge.* Take and record the tank opening gauge only after upper, middle, and outlet samples have been taken. Gauging must comply with paragraphs (b)(5)(i) through (b)(5)(v) of this section and API 3.1A (incorporated by reference, see § 3174.4).

(i) Gauging must use the proper bob for the particular measurement method, *i.e.,* either innage gauging or outage gauging.

(ii) Gauging must use gauging tapes made of steel or corrosion-resistant material with graduation clearly legible. The gauging tape must not be kinked or spliced.

(iii) Acceptable gauging requires either obtaining two consecutive identical gauging measurements or three consecutive measurements within ⅛-inch of each other, averaging these three measurements to the nearest ⅛ inch.

(iv) A suitable product-indicating paste may be used on the tape to facilitate the reading. The use of chalk or talcum powder is prohibited.

(v) The same tape and bob must be used for both opening and closing gauges.

(6) *Determine S&W content.* Using the oil samples in the centrifuge tubes collected from the upper and outlet fluid column (see paragraph (b)(3) of this section), determine the S&W content of the oil in the sales tanks, according to paragraphs (b)(6)(i) through (iii) of this section and API 10.4 (incorporated by reference, see § 3174.4).

(i) A thoroughly mixed oil sample-solvent combination, prepared in accordance with the procedure described in API 10.4.9.2 (incorporated by reference, see § 3174.4), must be heated to 140° F before centrifuging.

(ii) The heated sample must be whirled in the centrifuge for not less than 5 minutes. At the conclusion of centrifuging, the temperature must be a minimum of 115° F without water-saturated diluents or 125° F with water-saturated diluents.

(iii)(A) For 100-milliliter tubes, refer to API 10.4.9 Figure 1 (incorporated by reference, see § 3174.4). Read and record the volume of both water and sediment in each tube and add the readings together reporting the sum as the percent of S&W. Record the S&W to three decimal places.

(B) For 200-part (percent) tubes, refer to API 10.4.9 Figure 2 (incorporated by reference, see § 3174.4). The percent of S&W is the average of the values directly read from the tubes. Record the S&W to three decimal places.

(7) *Transfer oil.* Break the tank load line valve seal and transfer oil to the tanker truck. After transfer is complete, close the tank valve and seal the valve under §§ 3173.2 and 3173.5 of this part.

(8) *Determine closing oil temperature.* Determine the closing oil temperature using the procedures in paragraph (b)(2) of this section.

(9) *Take closing gauge.* Take the closing tank gauge using the procedures in paragraph (b)(5) of this section.

(10) *Complete measurement ticket.* The operator, purchaser, or transporter, as appropriate, must complete the measurement ticket (run ticket) as required by paragraphs (b)(10)(i) through (vii) of this section and by § 3174.12(a) of this subpart.

(i) The observed oil gravity must be corrected to 60° F using ASTM Table 5A or API 11.1 (both incorporated by reference, see § 3174.4).

(ii) Use the opening gauge with the tank-specific calibration charts (tank tables) (see paragraph (e) of this section) to compute the total observed volume of oil prior to sales.

(iii) Correct the total observed volume of oil prior to sales to 60 °F using the calculated API oil gravity at 60° F (see paragraph (b)(1) of this section) and the opening oil temperature using ASTM Table 6A or API 11.1 (both incorporated by reference, see § 3174.4) to determine the gross standard volume prior to sales.

(iv) Use the closing gauge with the tank-specific calibration charts (tank tables) to compute the total observed volume of oil after sales.

(v) Correct the total observed volume of oil after sales to 60° F using the API oil gravity corrected to 60° F (see paragraph (b)(1) of this section) and the closing oil temperature using ASTM Table 6A or API 11.1 (both incorporated by reference, see § 3174.4) to determine the gross standard volume after sales.

(vi) The gross standard volume sold is the difference between the gross standard volume prior to sales and the gross standard volume after sales.

(vii) The gross standard volume sold must be corrected for quantities of non-merchantable substances such as S&W to determine net standard volume (may be corrected at a later time prior to Oil and Gas Operations Report submission).

§ 3174.7 LACT system—general requirements.

(a) A LACT system must meet the construction and operation requirements and minimum standards of this section and § 3174.8 and API 6.1 (incorporated by reference, see § 3174.4).

(b) A LACT system must be proven as prescribed in § 3174.11 of this subpart. Measurement tickets must be completed under § 3174.12(b) of this subpart before conducting proving operations.

(c) The following table lists the requirements under which the operator must measure oil using a LACT system:

STANDARDS TO MEASURE OIL BY A LACT SYSTEM

Subject	Section reference
Required LACT system components	3174.8(a)
Accessibility of LACT system components to AO	3174.7(d)
Notification of LACT system failures or malfunctions adversely affecting accurate measurement	3174.7(e)
Oil gravity, temperature, and S&W content testing requirements	3174.7(f)
Required LACT system component—charging pump and motor	3174.8(b)(1)
Required LACT system component—sampler	3174.8(b)(2)
Required LACT system component—composite sample container	3174.8(b)(3)
Required LACT system component—mixing system	3174.8(b)(4)
Required LACT system component—strainer	3174.8(b)(5)
Required LACT system component—air eliminator	3174.8(b)(6)
Required LACT system component—S&W monitor	3174.8(b)(7)
Required LACT system component—diverter valve or shut-off valve	3174.8(b)(8)
Required LACT system component—positive displacement meter	3174.8(b)(9)
Required LACT system component—pressure indicating device	3174.8(b)(10)
Required LACT system component—electronic temperature averaging device	3174.8(b)(11)
Required LACT system component—meter proving connections	3174.8(b)(12)
Required LACT system component—back-pressure and check valves	3174.8(b)(13)

(d) All components of a LACT system must be accessible for inspection by the AO.

(e)(1) The operator must notify the AO within 24 hours of any LACT system failures or equipment malfunctions which may have resulted in measurement error.

(2) Such system failures or equipment malfunctions include, but are not limited to, electrical, meter, and other failures that affect oil measurement.

(f) Any tests conducted on oil samples extracted from LACT system samplers for determination of temperature, oil gravity, and S&W content must meet the requirements and minimum standards in §§ 3174.6(b)(2), (4), and (6) of this subpart.

(g) Automatic temperature compensators and automatic temperature and gravity compensators are prohibited.

§ 3174.8 LACT system—components and operating requirements.

(a) *LACT system components.* Each LACT system must include all of the following components:

(1) Charging pump and motor;

(2) Sampler, composite sample container, and mixing system;

(3) Strainer;

(4) Air eliminator;

(5) S&W monitor;

(6) Diverter valve or shut-off valve;

(7) Positive displacement meter;

(8) Electronic temperature averaging device;

(9) Meter proving connections; and

(10) Meter back-pressure valve and check valve.

(b) Operation of all LACT system components must meet the following minimum standards:

(1) *Charging pump and motor.* The LACT system must include an electrically driven pump that has a discharge pressure compatible with the meter used and sized to assure that the turbulent flow in the LACT main stream

piping and that the measurement uncertainty levels in § 3174.3(a) of this subpart are met.

(2) *Sampler.* The sampler probe must extend into the center one-third of the flow piping in a vertical run, at least 3 pipe diameters downstream of any pipe fitting. The probe must always be in a horizontal position.

(3) *Composite sample container.* The composite sample container must be capable of holding the sample under pressure, be equipped with a vapor-proof top closure, and operated to prevent the unnecessary escape of vapor. The container must be emptied and cleaned upon completion of sample withdrawal.

(4) *Mixing system.* The mixing system must completely blend the sample (inside the sample composite container) into a homogeneous mixture before and during the withdrawal of a portion of a sample for testing.

(5) *Strainer.* The strainer must be constructed so that it may be depressurized, opened, and cleaned. The strainer must be located upstream of the meter and be made of corrosion resistant material of a mesh size no larger than ¼-inch.

(6) *Air eliminator.* An air eliminator must be installed to prevent air or gas from entering the meter.

(7) *S&W monitor.* The S&W monitor must be an internally plastic-coated capacitance probe mounted in a vertical pipe located upstream from both the meter and the diverter valve or shut-off valve.

(8) *Diverter valve or shut-off valve.* The diverter valve or shut-off valve must be configured to prevent the flow of oil through the positive displacement meter whenever the S&W monitor detects S&W above a pre-determined limit, usually a contractual value agreed upon by the purchaser and the seller.

(9) *Positive displacement meter.* The meter must register volumes determined by a system which constantly and mechanically isolates the flowing oil into segments of known volume, and must be equipped with a non-resettable totalizer. The meter must include or allow for the attachment of a device which generates at least 8,400 pulses per barrel of registered volume.

(10) *Pressure indicating device.* The system must have a pressure indicating device downstream of the meter, but upstream of meter proving connections.

(11) *Electronic temperature averaging device.* An electronic temperature averaging device must be installed, operated, and maintained as follows:

(i) The temperature sensor must be placed as required under API 7.1 (incorporated by reference, see § 3174.4);

(ii) The electronic temperature averaging device must be flow proportional and take a temperature reading at least once per barrel;

(iii) The average temperature for the measurement ticket must be calculated by the volumetric averaging method using API 21.2.9.2.13.2a (incorporated by reference, see § 3174.4);

(iv) The temperature averaging device must have a reference accuracy of ±0.5 °F, or better; and

(v) The temperature averaging device must include a display of instantaneous temperature and the average temperature calculated since the measurement ticket was opened. The temperatures must be displayed to the nearest 0.1 °F.

(12) *Meter-proving connections.* All meter-proving connections must be installed downstream from the LACT meter with the line valve(s) between the inlet and outlet of the prover loop having a double block and bleed design feature to provide for leak testing during proving operations.

(13) *Back-pressure and check valves.* The back-pressure valve and check valve must be installed downstream from the meter and meter-proving connections.

§ 3174.9 Coriolis measurement systems (CMS)—general requirements and components.

(a) The specific makes, models, and sizes of Coriolis meter and associated software that are identified and described at *www.blm.gov* are approved for use.

(b) A CMS must meet the operational requirements and minimum standards of this section, § 3174.10 and API 5.6 (incorporated by reference, see § 3174.4).

(c) A CMS system must be proven at the frequency and under the requirements of § 3174.11 of this subpart. Measurement tickets must be completed under § 3174.12(b) of this subpart before conducting proving operations.

(d) The following table lists the requirements and applicable API standards under which an operator must measure oil using a CMS:

STANDARDS APPLICABLE TO CMS USE

Subject	Section reference	API Reference (incorporated by reference, see § 3174.4)
Coriolis meter components	3174.9(e)	API 5.6.
Minimum pulse output	3174.10(a)	(None).
Specifications	3174.10(b)	(None).
Orientation	3174.10(c)	API 5.6.3.2.(e).
Notification of changes	3174.10(d)	(None).
Non-resettable totalizer	3174.10(e)	(None).
Verification of meter zero value	3174.10(f)	API 5.6.8.3.
Determination of net standard volume	3174.10(g)	(None).
Determination of API oil gravity	3174.10(h)	(None).
Display requirements	3174.10(i)(1)	(None).
Displayed information requirements	3174.10(i)(2)	(None).
Onsite information requirements	3174.10(i)(3)	(None).
Onsite log information requirements	3174.10(i)(4)	(None).
Quantity transaction record	3174.10(j)(1)	API 21.2.10.3.
Configuration log	3174.10(j)(2)	API 21.2.10.2.
Event log	3174.10(j)(3)	API 21.2.10.6.
Alarm log	3174.10(j)(4)	(None).
Data protection	3174.10(k)	(None).

(e) A CMS at an FMP must be installed with the following minimum components listed in order from upstream to downstream:

(1) Charge pump, if necessary to maintain the minimum required pressure under API 5.6.3.2 (incorporated by reference, see § 3174.4) and flow rate to achieve the uncertainty levels required under § 3174.3(a) of this subpart;

(2) Block valve upstream of the meter (for zero value verification);

(3) Air/vapor eliminator upstream of the meter;

(4) Coriolis meter (see § 3174.10(a) through (f) of this subpart);

(5) RTD downstream of the meter, but upstream of the meter-proving connection, with a reference accuracy of ±0.5 °F, or better, and on the list of type-tested equipment maintained at *www.blm.gov;*

(6) Pressure transducer downstream of the meter, but upstream of the meter-proving connection, with a reference accuracy of ±0.25 psi, or ±0.25 percent of reading, or better, whichever is less restrictive, and on the list of type-tested equipment maintained at *www.blm.gov;*

(7) Density measurement verification point;

(8) Sampling system as required in § 3174.8 paragraphs (b)(2) through (4) of this subpart, if S&W is to be used in determining net oil volume. If no sampling system is included, the S&W must be reported as zero (see § 3174.10(g)(3) of this subpart);

(9) Meter-proving connection (block and bleed valves) downstream of the meter;

(10) Back-pressure valve downstream of the meter; and

(11) Check valve downstream of the meter.

§ 3174.10 Coriolis measurement systems—operating requirements.

(a) *Minimum electronic pulse level.* The Coriolis meter must register the volume of oil passing through the meter as determined by a system which constantly emits electronic pulse signals representing the registered volume measured. The pulse per unit volume must be set at a minimum of 8,400 pulses per barrel.

(b) *Meter specifications.* (1) The Coriolis meter specifications must clearly identify the make and model of the Coriolis meter to which they apply and must include the following:

(i) The reference accuracy for both mass flow rate and density, stated in either percent of reading, percent of full scale, or units of measure;

(ii) The effect of changes in temperature and pressure on both mass flow and fluid density readings, and the effect of flow rate on density readings. These specifications must be stated in percent of reading, percent of full scale, or units of measure over a stated amount of change in temperature, pressure, or flow rate (*e.g.,* ''±0.1 percent of reading per 20 psi'');

(iii) The stability of the zero reading for both mass and volumetric flow rate. The specifications must be stated in percent of reading, percent of full scale, or units of measure;

(iv) Minimum lengths of straight piping upstream and downstream of the meter necessary to achieve the stated reference accuracy;

(v) Design limits for flow rate and pressure; and

(vi) Pressure drop through the meter as a function of flow rate and fluid viscosity.

(2) *Submission of meter specifications.* The operator must submit Coriolis meter specifications to the BLM upon request.

(c) *Meter orientation.* The Coriolis meter must be oriented using API 5.6.3.2.(e) (incorporated by reference, see § 3174.4).

(d) *Changes to calibration factors.* The operator must notify the AO within 24 hours of any changes to any Coriolis meter internal calibration factors including, but not limited to, meter factor, pulse-scaling factor, flow-calibration factor, density-calibration factor, or density-meter factor.

(e) *Non-resettable totalizer.* The Coriolis meter must have a non-resettable internal totalizer for registered volume.

(f) *Verification of meter zero value.* Before proving the meter, or any time the AO requests it, the zero value stored in the meter using API 5.6.8.3 (incorporated by reference, see § 3174.4) must be verified by stopping the flow through the meter and then monitoring the indicated mass flow rate under this condition. If the zero error equals or exceeds the stated zero stability specification of the meter, as calculated by the following equation (API 5.6, Eq. (2) (incorporated by reference, see § 3174.4)), the meter must be zeroed:

$$Err_0 = \frac{q_0}{q_f} \times 100$$

Where:
Err_0 = zero error (percent)
q_0 = observed zero value (flow rate)
q_f = flow rate during normal operation

(g) *Determination of net standard volume.* The net standard volume on which royalty is due must be calculated as follows:

(1) Calculate the corrected registered volume at the close of each measurement ticket by multiplying the registered volume over the measurement ticket period by the meter factor determined from the most recent proving.

(2) Calculate the gross standard volume at the close of each measurement ticket by multiplying the corrected registered volume by the CPL and CTL determined from the average pressure and average temperature, respectively, taken over the measurement ticket period. The average pressure and temperature must be determined using API 21.2.9.2.13.2a (incorporated by reference, see § 3174.4).

(3) Calculate the net standard volume at the close of each measurement ticket by multiplying the gross standard volume by the quantity of one minus the S&W content (expressed as a fraction) from the composite sample taken over the measurement ticket period. If the CMS does not include a composite sampling system, the S&W content is zero and the net standard volume will equal the gross standard volume.

(h) *Determination of API oil gravity.* The API oil gravity reported for the measurement ticket period must be determined by one of the following methods:

(1) From a composite sample taken under the requirements of § 3174.6(b)(4) of this subpart; or

(2) Calculated from the average density, average temperature, and average pressure as measured by the CMS over the measurement ticket period under API 21.2.9.2.13.2a (incorporated by reference, see § 3174.4). The average density must be corrected to base temperature and pressure using ASTM Table 6A or API 11.1, (both incorporated by reference, see § 3174.4).

(i) *Required on-site information.* (1) The CMS display must be readable without using data collection units, laptop computers, or any special equipment, and must be on-site and accessible to the AO.

(2) For each CMS, the following values and corresponding units of measurement must be displayed:

(i) The instantaneous mass flow rate through the meter (pounds/day);

(ii) The instantaneous density of liquid (pounds/bbl);

(iii) The instantaneous registered volumetric flow rate through the meter (bbl/day);

(iv) The meter factor;

(v) The instantaneous pressure (psi);

(vi) The instantaneous temperature (°F);

(vii) The cumulative gross standard volume through the meter (non-resettable totalizer) (bbl);

(viii) The previous day's gross standard volume through the meter (bbl); and

(ix) The meter alarm conditions.

(3) The following information must be correct, be maintained in a legible condition, and be accessible to the AO at the FMP without the use of data collection equipment, laptop computers, or any special equipment:

(i) The make, model, and size of each sensor; and

(ii) The make, range, calibrated span, and model of the pressure and temperature transducer used to determine gross standard volume.

(4) A log must be maintained of all meter factors, zero verifications, and zero adjustments. For zero adjustments, the log must include the zero value before adjustment and the zero value after adjustment. This log must be located on-site and accessible to the AO.

(j) *Audit trail requirements.* The information specified in paragraphs (j)(1) through (4) of this section must be recorded and retained under the recordkeeping requirements of § 3170.7 of this part. Audit trail requirements must follow API 21.2.10 (incorporated by reference, see § 3174.4). All data must be available and submitted to the BLM upon request.

(1) *Quantity transaction record (QTR).* Follow the requirements for a CMS measurement ticket in § 3174.12(b) of this subpart.

(2) *Configuration log.* The configuration log must comply with the requirements of API 21.2.10.2 (incorporated by reference, see § 3174.4). The configuration log must contain and identify all constant flow parameters used in generating the QTR.

(3) *Event log.* The event log must comply with the requirements of API 21.2.10.6 (incorporated by reference, see § 3174.4). In addition, the event log must be of sufficient capacity to record all events such that the operator can retain the information under the recordkeeping requirements of § 3170.7 of this part.

(4) *Alarm log.* The type and duration of any of the following alarm conditions must be recorded:

(i) Density deviations from acceptable parameters; and

(ii) Instances in which the flow rate exceeded the manufacturer's maximum recommended flow rate or were below the manufacturer's minimum recommended flow rate.

(k) *Data protection.* Each CMS must have installed and maintained in an operable condition a backup power supply or a nonvolatile memory capable of retaining all data in the unit's memory to ensure that the audit trail information required under paragraph (j) of this section is protected.

§ 3174.11 Meter proving requirements.

(a) *Applicability.* This section specifies the minimum requirements for conducting volumetric meter proving for all FMP meters. The FMP meter must not be used for royalty volume determination unless all of the requirements in this section are met.

(b) *Summary.* The following table lists the requirements and minimum standards for proving FMP meters:

MINIMUM STANDARDS FOR PROVING FMP METERS

Subject	Section reference
Meter Prover	3174.11(c).
Meter Proving Runs	3174.11(d).
Minimum Proving Frequency	3174.11(e).
Excessive Meter Factor Deviation	3174.11(f).
Temperature Verification	3174.11(g).
Pressure Verification	3174.11(h).
Density Verification	3174.11(i).
Meter Proving Reporting Requirements	3174.11(j).

(c) *Meter prover.* Acceptable provers are positive displacement master meters, Coriolis master meters, and displacement provers. The operator must ensure that the meter prover used to determine the meter factor has a valid certificate of calibration available for review by the AO on site that shows that the prover, identified by serial number assigned to and inscribed on the prover, was calibrated as follows:

(1) Master meters must have a meter factor within 0.9900 to 1.0100 determined by a minimum of five consecutive prover runs within 0.0002 (0.02 percent repeatability). The master meter must not be mechanically compensated for oil gravity or temperature; its readout must indicate units of volume without corrections. The certified meter factor must be documented on the calibration certificate and must be calibrated no less frequently than every 90 days under API 4.5 (incorporated by reference, see § 3174.4).

(2) Displacement provers must meet the requirements under API 4.2 (incorporated by reference, see § 3174.4) and be calibrated using the water-draw method under API 4.9.2 (incorporated by reference, see § 3174.4), at the following frequencies:

(i) Portable provers must be calibrated at least once every 36 months; and

(ii) Permanently installed provers must be calibrated at least once every 60 months.

(3) The base prover volume of a displacement prover must be calculated under API 12.2.4 (incorporated by reference, see § 3174.4).

(4) Displacement provers must be sized to obtain a displacer velocity through the prover that is within the appropriate range during proving as follows:

Prover type	Minimum velocity (ft/sec)	Maximum velocity (ft/sec)
Displacement—unidirectional	0.5	10
Displacement—bidirectional	0.5	5
Piston (Small volume prover)	0.25	5

Fluid velocity is calculated by the following equation (API 4.2., Eq. 12 (incorporated by reference, see § 3174.4)):

$$V_d = \frac{0.286 \times Q}{D_p^2}$$

Where:
V_d = displacer velocity, ft/sec.
D_p = inside diameter of prover, in.
Q = flow rate, barrels per hour (bbl/hr)

(d) *Meter proving runs.* Meter proving must follow the applicable section(s) of API 4.1—Proving Systems (incorporated by reference, see § 3174.4).

(1) Meter proving must be performed under normal operating fluid pressure, fluid temperature, and fluid type and composition, as follows:

(i) The oil flow rate through the LACT or CMS during proving must be within 10 percent of the normal flow rate;

(ii) The absolute pressure as measured by the LACT or CMS during proving must be within 10 percent of the normal operating absolute pressure; and

(iii) The gravity of the oil during proving must be within 5 degrees API of the normal oil gravity.

(iv) If the normal flow rate, pressure, temperature, or oil gravity vary by more than the limits defined in paragraphs (d)(i) through (iii) of this section, meter provings must be conducted under three conditions, namely, at the lower limit of normal operating conditions, at the upper limit of normal operation conditions, and at the midpoint of normal operating conditions.

(2) If each proving run is not of sufficient volume to generate at least 10,000 pulses from the positive displacement meter in a LACT system or the Coriolis meter in a CMS, pulse interpolation must be used in accordance with API 4.6 (incorporated by reference, see § 3174.4).

(3) Proving runs must be made until the calculated meter factor from five consecutive runs match within a tolerance of 0.0005 (0.05 percent) between the highest and the lowest value.

(4) The new meter factor is the arithmetic average of the meter factors calculated from the five consecutive runs.

(5) Meter factor computations must follow the sequence described in API 12.2.3 (incorporated by reference, see § 3174.4).

(6) If multiple meters factors are determined over a range of normal operating conditions, then:

(i) A single meter factor may be calculated as the arithmetic average of the three meter factors determined over the range of normal operating conditions; or

(ii) The metering system may apply a dynamic meter factor derived from the three meter factors determined over the range of normal operating conditions.

(7) The meter factor must be at least 0.9900 and no more than 1.0100.

(8) The initial meter factor for a new or repaired meter must be at least 0.9950 and no more than 1.0050.

(9) The back-pressure valve may be adjusted after proving only within the normal operating fluid flow rate and fluid pressure as described in paragraph (d)(1) of this section. If the back-pressure valve is adjusted after proving, the operator must document the ‘‘as left’’ fluid flow rate and fluid pressure on the proving report.

(10) If a composite meter factor is calculated, the CPL value must be calculated from the pressure setting of the back-pressure valve or the normal operating pressure at the meter. Composite meter factors must not be used in a CMS.

(e) *Minimum proving frequency.* The operator must prove any FMP meter before removal or sales of production after any of the following events:

(1) Initial meter installation;

(2) Each time the registered volume flowing through the meter, as measured on the non-resettable totalizer from the last proving, increases by 50,000 bbl or quarterly, whichever occurs first;

(3) Meter zeroing (CMS);

(4) Modification of mounting conditions;

(5) A change in fluid temperature outside of the RTD's calibrated span;

(6) A change in pressure, density, or flow rate that is outside of the operating proving limits;

(7) The mechanical or electrical components of the meter have been opened, changed, repaired, removed, exchanged, or reprogrammed; or

(8) At the request of the AO.

(f) *Excessive meter factor deviation.* (1) If the difference between meter factors established in two successive provings exceeds ±0.0025, the meter must be immediately removed from service, checked for damage or wear, adjusted or repaired, and re-proved before returning the meter to service.

(2) The arithmetic average of the two successive meter factors must be applied to the production measured through the meter between the date of the previous meter proving and the date of the most recent meter proving.

(3) The proving report submitted under paragraph (j) of this section must clearly show the most recent meter factor and describe all subsequent repairs and adjustments.

(g) *Verification of the temperature averager or RTD.* As part of each required meter proving, the temperature averager for a LACT system and the RTD used in conjunction with a CMS must be verified against a known standard according to the following:

(1) The temperature averager or RTD must be compared with a test thermometer traceable to NIST and with a stated accuracy of ±0.25 °F or better.

(2) The temperature reading displayed on the temperature averager or tertiary device must be compared with the reading of the test thermometer using one of the following methods:

(i) The test thermometer must be placed in a test thermometer well located not more than 12″ from the probe of the temperature averager or RTD; or

(ii) Both the test thermometer and probe of the temperature averager or RTD must be placed in an insulated water bath. The water bath temperature must be within 10 °F of the normal flowing temperature of the oil.

(3) The displayed reading of instantaneous temperature from the temperature averager or the tertiary device must be compared with the reading from the test thermometer. If they differ by more than 0.5 °F, then:

(i) The temperature averager or tertiary device must be adjusted to match the reading of the test thermometer; or

(ii) The difference in temperatures must be noted on the meter proving report and all temperatures used until the next proving must be adjusted by the difference.

(h) *Verification of the pressure transducer (CMS only).* (1) The pressure transducer must be compared with a test pressure device (dead weight or pressure gauge) traceable to NIST and with a stated accuracy at least two times better than the reference accuracy of the pressure device being tested.

(2) The pressure reading displayed on the tertiary device must be compared with the reading of the test pressure device.

(3) The pressure transducer must be tested at the following three points:

(i) Zero (atmospheric pressure);

(ii) 100 percent of the calibrated span of the pressure transducer; and

(iii) At a point that represents the normal flowing pressure through the Coriolis meter.

(4) If the pressure applied by the test pressure device and the pressure displayed on the tertiary device vary by more than the required accuracy of the pressure transducer, the pressure transducer must be adjusted to read

within the pressure device's stated accuracy of the test pressure device.

(i) *Density verification (CMS only).* If the API gravity of oil is determined from the average density measured by the Coriolis meter (rather than from a composite sample), then during each proving of the Coriolis meter, the instantaneous flowing density determined by the Coriolis meter must be verified by comparing it with an independent density measurement as specified under API 5.6.9.1.2.1. (incorporated by reference, see § 3174.4). The difference between the indicated density determined from the CMS and the independently determined density must be within the specified density reference accuracy specification of the Coriolis meter.

(j) *Meter proving reporting requirements.* (1) The operator must report to the AO all meter-proving and volume adjustments after any LACT system or CMS malfunction, including excessive meter-factor deviation, using the appropriate form in either API 12.2.3, or API 5.6 (both incorporated by reference, see § 3174.4), or any similar format showing the same information as the API form, provided that the calculation of meter factors maintains the proper calculation sequence and rounding.

(2) In addition to the information required under paragraph (j)(1) of this section, each meter-proving report must also show the:

(i) FMP number;

(ii) Lease number, CA number, or unit PA number;

(iii) The temperature from the test thermometer and the temperature from the temperature averager or tertiary device;

(iv) For CMS, the pressure applied by the pressure test device and the pressure reading from the tertiary device at the three points required under paragraph (h)(3) of this section; and

(v) The ''as left'' fluid flow rate and fluid pressure, if the back-pressure valve is adjusted after proving as described in § 3174.11(d)(9).

(3) The operator must submit the meter-proving report to the AO no later than 14 days after the meter proving.

§ 3174.12 Measurement tickets.

(a) *Manual tank gauging.* Immediately after oil is measured by manual tank gauging under §§ 3174.5 and 3174.6 of this subpart, the operator, purchaser, or transporter, as appropriate, must complete a uniquely numbered measurement ticket, in either paper or electronic format, with the following information:

(1) Lease, unit, or communitization agreement number;

(2) FMP number;

(3) Unique tank number and nominal tank capacity;

(4) Opening and closing dates and times;

(5) Opening and closing gauges and observed temperatures in °F;

(6) Total observed volume prior to sales and after sales;

(7) Total gross standard volume removed from the tank;

(8) Observed API oil gravity and temperature;

(9) API oil gravity at 60 °F;

(10) S&W percent;

(11) Unique number of each seal removed and installed;

(12) Name of the individual performing the manual tank gauging;

(13) Name of the operator; and

(14) Name of the operator's representative certifying that the measurement is correct.

(15) If the operator does not agree with the tank gauger's measurement, the operator must notify the AO within 7 days of the reasons for the operator's disagreement with the tank gauger's measurement.

(b) *LACT system and CMS.* (1) Before conducting proving operations on a LACT system or CMS and, at a minimum, at the beginning of every month, the operator, purchaser, or transporter, as appropriate, must complete a uniquely numbered measurement ticket, in either paper or electronic format, with the following information:

(i) Lease, unit, or communitization agreement number;

(ii) FMP number;

(iii) Opening and closing dates;

(iv) Opening and closing totalizer readings of the registered volume;

(v) Meter factor from the most recent proving;

(vi) Total gross standard volume removed through the LACT system or CMS;

(vii) API oil gravity. For API oil gravity determined from a composite sample, the API oil gravity at 60° F and the observed API oil gravity and temperature in °F. For API oil gravity determined from average density (CMS only), the average uncorrected density determined by the CMS;

(viii) The average temperature in °F;

(ix) The average flowing pressure in psig;

(x) S&W percent;

(xi) Unique number of each seal removed and installed;

(xii) Name of the purchaser's representative;

(xiii) Name of the operator; and

(xiv) Name of the operator's representative certifying that the measurement is correct.

(2) If the purchaser or transporter takes the LACT system or CMS measurement, and if the operator does not agree with the measurement, the operator must notify the AO within 7 days of the reasons for the operator's disagreement with the LACT system or CMS measurement.

(3) The accumulators used in the determination of average pressure, average temperature, and average density must be reset to zero whenever a new measurement ticket is opened.

§ 3174.13 Oil measurement by other methods.

(a) Any method of oil measurement other than manual tank gauging, LACT system, or CMS at an FMP requires BLM approval.

(b)(1) Any operator requesting approval to use alternate oil measurement equipment must submit to the BLM performance data, actual field test results, laboratory test data, or any other supporting data or evidence that demonstrates that the proposed alternate oil equipment would meet or exceed the objectives of the applicable minimum requirements of this subpart and would not affect royalty income or production accountability.

(2) The PMT will review the submitted data to ensure that the alternate oil measurement equipment meets the requirements of this subpart and will make a recommendation to the BLM to approve use of the equipment, disapprove use of the equipment or approve use of the equipment with conditions for its use. If the PMT recommends, and the BLM approves new equipment, the BLM will post the make, model, and range or software version on the BLM Web site *www.blm.gov* as being appropriate for use at an FMP for oil measurement.

(c) The procedures for requesting and granting a variance under § 3170.6 of this part may not be used as an avenue for approving new technology, methods, or equipment. Approval of alternative oil measurement equipment or methods may be obtained only under this section.

§ 3174.14 Determination of oil volumes by methods other than measurement.

(a) Under 43 CFR 3162.7–2, when production cannot be measured due to spillage or leakage, the amount of production must be determined by using any method the AO approves or prescribes. This category of production includes, but is not limited to, oil that is classified as slop oil or waste oil.

(b) No oil may be classified or disposed of as waste oil unless the operator can demonstrate to the satisfaction of the AO that it is not economically feasible to put the oil into marketable condition.

(c) The operator may not sell or otherwise dispose of slop oil without prior written approval from the AO. Following the sale or disposal of slop oil, the operator must notify the AO in writing of the volume sold or disposed of and the method used to compute the volume.

§ 3174.15 Immediate assessments.

Certain instances of noncompliance warrant the imposition of immediate assessments upon the BLM's discovery of the violation, as prescribed in the following table. Imposition of any of these assessments does not preclude other appropriate enforcement actions.

VIOLATIONS SUBJECT TO AN IMMEDIATE ASSESSMENT

Violation	Assessment amount per violation
1. Missing or nonfunctioning FMP LACT system components as required by § 3174.8(a) of this subpart	$1,000
2. Failure to notify the AO within 24 hours of any FMP LACT system failure or equipment malfunction resulting in use of an unapproved alternate method of measurement as required by § 3174.7(e) of this subpart	1,000
3. Missing or nonfunctioning FMP CMS components as required by § 3174.9(e) of this subpart	1,000
4. Failure to notify the AO within 7 days of any changes to any CMS internal calibration factors as required by § 3174.10(d) of this subpart	1,000
5. Failure to meet the proving frequency requirements for an FMP as required by § 3174.11(e) of this subpart	1,000
6. Failure to obtain a written variance approval before using any oil measurement method other than manual tank gauging, LACT system, or CMS at a FMP as required by § 3174.13 of this subpart	1,000

[FR Doc. 2015–24008 Filed 9–29–15; 8:45 am]

BILLING CODE 4310–84–P