Oil and Gas Onshore Orders – A Public Forum

Measurement Accuracy and Production Accountability on Federal and Tribal Lands
Agenda

- Onshore Order 3 – Site Security...
  Questions and comments

- <Break>

- Onshore Order 4 – Oil Measurement
  Questions and comments

- Onshore Order 5 – Gas Measurement
  Questions and comments

- Draft Proposed Changes to all three Orders

- Questions and Comments on all topics
Proposed Revisions to Onshore Order 3
Site Security
Facility Measurement Points
Commingling
Off-lease measurement
# Subjects Covered

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Facility Measurement Points

Existing

• No consistent tracking of royalty meters or measurement facilities
• Measurement standards (Orders 4, 5) apply to “sales and allocation” facilities
Facility Measurement Points

Proposed Revisions

• All measurement facilities used for royalty would require Facility Measurement Point (FMP) approval and would be assigned an FMP number

• Measurement standards (Orders 4, 5) would only apply to FMPs
Facility Measurement Point (FMP)

- New facilities would require FMP number prior to sales
- Existing facilities within 18 months
- FMP number would be shown on all measurement equipment
- All documentation (including OGORs) would require FMP number
Commingling

“...commingling with production from other sources prior to measurement may be approved...” 43 CFR 3162.7-2&3

Source:

• Federal or Indian lease
• Federal or Indian CA
• Federal or Indian unit PA
• State or fee lease

Applies to both surface and downhole
Commingling – Existing

• “Commingling with production from other sources may be approved...” (43 CFR 3162.7-2(oil) -3 (gas)

• IM 2011-184 provides guidance to Field Offices on how to review applications
- Verifiability
- Accuracy: ±1%
Oil rate: 50 bpd

\[ V_{\text{royalty}} = V_{\text{measured}} \times F_{\text{allocation}} \]

\( \pm 1\% \)

\( \pm 20\% \)

Verifiability

Accuracy: ?

Fee Lease
Commingling only allowed if:

- No royalty impacts
  - 100% Federal or 100% Indian (same tribe)
- Same royalty rate
- Same royalty revenue distribution
- Economics (low-volume)
- Overriding considerations
  - Environmental considerations
  - Maximum ultimate recovery
Questions/Comments on Proposed Revisions to Order 3?
Proposed Revisions to Onshore Order 4
Oil Measurement
## Subjects Covered

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Overall Uncertainty

Existing Order 4

• No explicit uncertainty limits
• Standards apply to all sales and allocation meters, regardless of production rate

Proposed Revisions to Order 4

• > 10,000 bbl/month: ±0.35%
• ≤ 10,000 bbl/month: ±1.0%
Proposed Coriolis Requirements

- Specification on request
  - Reference accuracy (volume and density)
  - Temperature and pressure effects
  - Zero stability
- Meter run requirements
- Pressure and temperature limits
- Pressure drop
- Non-resettable totalizer for registered volume (bbls at metered conditions)
- Zero check
Questions/Comments on Proposed Revisions to Order 4?
Proposed Revisions to Onshore Order 5
Gas Measurement
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## Subjects Covered - EGM

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<td>On-site data</td>
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<td>LFCO = 0.5”</td>
<td>LFCO = 0.5”</td>
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<tr>
<td>Atmos. pressure</td>
<td>Atmos. Pressure (no cntrct)</td>
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<tr>
<td>IV not required</td>
<td>IV required</td>
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</tbody>
</table>
Proposed List of Approved Equipment

- Flange-tapped orifice plates
- Chart recorders (≤ 100 Mcf/day)
- Gas chromatographs
- Specific type-tested equipment:
  - Transducers (make, model, URL)
  - Flow computer software (version)
  - Flow conditioners (make, model, size)
  - Primary devices (make, model, size)
- Type testing per Order 5 or industry standard
- Approved equipment listed on BLM website, with restrictions, if needed
Gas sampling frequency - Existing

- Once per year

Gas sampling frequency – Proposed Revisions

- For FMPs ≤ 100 Mcf/day:
  Once per year

- For FMPs > 100 Mcf/day:
  “dynamic sampling frequency”
“MMS and BLM should develop a procedure to determine the potential BTU variability of produced natural gas on a by-reservoir or by-lease basis, and estimate the implications for royalty payments”

“MMS and BLM should adjust BTU frequency requirements for sampling and reporting on a case by-case basis, or consider other regulatory Requirements”
Dynamic Sampling Frequency

- Sampling due dates would be calculated for each FMP based on historic variability of heating value
- Would require software to implement
- All gas analyses submitted to BLM electronically
- Next sample due date would be calculated and sent to the operator
- Composite sampling or on-line GC would eliminate sampling frequency requirement
Advantages

• Would achieve a consistent level of uncertainty
• Changes in variability would result in changes to sampling frequency
• Relative density uncertainty would be used in the calculation of flow rate uncertainty (Uncertainty Calculator)
• Would provide economic incentive for good sampling and analysis
EGM equipment - Existing
• No requirements

EGM equipment– Proposed Revisions
• Transducer testing requirements (API 22.4)
• Flow computer testing requirements (API 22.5)
• Test reports reviewed by BLM; approved equipment posted to BLM website
Questions/Comments on Proposed Revisions to Onshore Order 5?
Proposed Revisions Common to All Three Orders
Common Proposed Revisions

Existing Orders

• Enforcement actions (major/minor, corrective action, timeframes) included with each provision
Proposed Revisions to the Orders

• Enforcement actions would be placed in a new enforcement handbook

9. Meter tubes using flange taps or pipe taps shall have the pressure tap holes located as specified in AGA Committee Report No. 3.

Violation: Major.
Corrective Action: Install pressure tap as specified.
Abatement Period: Prior to sales.
Common Proposed Revisions

Existing Orders - Recordkeeping

• Six year initial retention period for records for both Federal and Indian

Proposed Revisions to the Orders

• Seven year initial retention period for records for Federal (30 USC 1724(f) RSFA )
• Six year initial retention period for records for Indian (30 USC 1713(b) FOGRMA)
Common Draft Proposed Revisions

**Existing Orders – Applies to Operators Only**

- Orders only apply to operators

**Proposed Revision to the Orders – includes transporters and purchasers**

- Requirements regarding retention of records would apply to purchasers and transporters through point of first sale (30 USC 1713(a))
Existing Enforcement Procedure

1. Inspection/Discovery
2. Violation?
   - yes: Incident of Non Compliance (INC)
   - no: Proceed to next step
3. Incident of Non Compliance (INC)
4. Follow Up Inspection OK?
   - yes: Inspection Closed
   - no: Next Step:
     - Assessment
     - Shut down
     - Civil penalties
Proposed Revision to Enforcement Procedure

- Inspection/Discovery
  - No
    - Violation?
      - Yes/some violations
        - Incident of Non Compliance (INC)
          - Follow Up Inspection OK?
            - No
              - Immediate Assessment
            - Yes
              - Inspection Closed
          - Next Step:
            - Assessment
            - Shut down
            - Civil penalties
      - yes
        - Inspection Closed
Common Draft Proposed Revisions

Proposed Revision to all Orders

• Immediate assessments would be added to each Order for selected violations
• $1000 per incident
• Maximum of $5000 per lease, CA, unit, per inspection
Questions/Comments on any of the Proposed Revisions?

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