

Workshop on Proposed Compliance Offset Protocol for Rice Cultivation Projects and Updates to Existing Protocols

California Air Resources Board

June 20, 2014

Workshop Materials and Comments Submittal

- Presentation and protocol discussion drafts are posted at:
<http://www.arb.ca.gov/cc/capandtrade/meetings/meetings.htm>
- Written comments may be submitted at:
<http://www.arb.ca.gov/cc/capandtrade/meetings/meetings.htm>
by midnight, June 30, 2014 (PDT)
- During the workshop, E-mail questions to:
auditorium@calepa.ca.gov

Agenda

- Offset Program Status Update
- Verification Training/Accreditation Update
- Proposed Updates to The Existing Protocols—
Livestock Projects, Mine Methane Capture Projects,
Ozone Depleting Substances (ODS) Destruction
Projects and US Forest Projects
- New Proposed Protocol Development—Rice
Cultivation Protocol
- Timeline
- CEQA

Offset Credit Issuance Update

- 4,344,158 ARB offset credits issued to Compliance Offset Projects
- 6,602,801 ARB offset credits issued to Early Action Offset Projects
- Total of 56 Early Action and Compliance Offset Projects credited

Verifier Training Update

- Eight training sessions held since June 2012 with attendance by:
 - 108 verifiers seeking accreditation
 - 31 Offset Project Registry (OPR) staff
 - 8 offset project operators/consultants
- Most recent training held first week of June 2014 included 24 participants in the MMC training
- Future trainings:
 - Possible – December 2014 in Sacramento
 - For more information, see:
<http://www.arb.ca.gov/cc/capandtrade/offsets/verification/verification.htm>

Verifier Accreditation Update

- 18 Verification Bodies accredited
- 94 Offset Verifiers accredited
 - 78 Lead verifiers
 - 43 Livestock project specialists
 - 35 US Forest project specialists
 - 34 ODS Destruction project specialists
 - 31 Urban Forest project specialists
- For more information, see:

<http://www.arb.ca.gov/cc/capandtrade/offsets/verification/verification.htm>

Questions?

Proposed Updates to the Existing Protocols

- The Livestock, ODS and U.S. Forest protocols are being updated to:
 - Correct errors and typos
 - Reflect the latest data used for quantification
 - Provide clarifications
- Mine Methane Capture protocol
 - Minor clarification on abandoned mine additionality
- Upon the adoption of the proposed updates:
 - Future projects must use the updated protocols.
 - Existing project may use the updated protocols continuing the existing crediting period.
 - Existing projects may continue to use the previous version

Proposed Updates to the ODS Destruction Protocol Quantitative Corrections and Updates

- Clarify where high boiling residue (HBR), moisture, and ineligible ODS are included and excluded in calculations
- Correct carbon ratios and percent/fraction discrepancy
- Specify the pound/metric ton conversion factor
- Allow for ASTM method (instead of only “Scheutz” method) for analysis of ODS foam blowing agent
- Add a conservative accounting method for ineligible ODS after destruction

Proposed Updates to the ODS Destruction Protocol Administrative and Regulatory Clarifications

- Convert explanatory text to regulatory format
 - Explanatory text removed
 - Some text shifted between chapters and appendices
- Add/remove some definitions and acronyms
- Clarify eligibility and regulatory compliance requirements
- Clarify descriptions of offset project commencement, reporting period, and crediting period

Questions?

Proposed Updates to the U.S. Forest Protocol

Quantitative Corrections and Updates

- Update conversion factors and clarify formulas and references for greater accuracy and consistency
- Add standing dead tree carbon pool adjustment (Domke et al 2011)
- Update Common Practice (CP) values
- Require summary tables by stratum and percent for each carbon pool (standing live, standing dead, above and below ground) for verification ease
- Consider expanding protocol to Alaska

Proposed Updates to the U.S. Forest Protocol

Administrative and Regulatory Clarifications

- Section 3.8.1 Sustainable Harvesting:
 - Clarify that Section 3.8.1 (certification, long term management options 1 & 2) requires the landholder to meet and apply the requirement to all landholdings throughout the US using Options 1, 2, or 3.
 - Clarify that the Uneven-Aged Management (Option 3) requirement applies to the project's Assessment Area, not to all landholdings, and that the "all landholdings" requirement may be met using Options 1, 2, or 3.
- Clarify steps for harvested wood product (HWP)
- Clarify sequential sampling process

Questions?

Proposed Updates to the Livestock Digester Protocol Quantitative Corrections and Updates

- Update equations to ensure consistent formatting and fix typos
- Update emission factors and other values
- Update volatile solids (VS) and typical animal mass (TAM) values
- Set maximum value for Van't Hoff-Arrhenius factor to 0.95
- Clarify baseline data substitution methodology for missing data durations greater than one week

Proposed Updates to the Livestock Digester Protocol Administrative and Regulatory Clarifications

- Convert explanatory text to regulatory format
 - Explanatory text removed
 - Some text shifted between chapters and appendices
- Clarify project listing date
- Clarify digester-type and cover-type categories
- Update protocol definitions and abbreviations

Proposed Updates to the Livestock Digester Protocol Implementation Clarifications and Updates

- Modify monitoring requirement for destruction devices
- Update equations to prorate emission reductions for incomplete calendar months

Questions?

New Protocol Development

Rice Cultivation Projects

- Rice cultivation protocol is intended to reduce methane emissions from traditional rice cultivation practices
- Methane (CH₄) facts:
 - Relatively large radiative efficiency
 - Second most important anthropogenic greenhouse gas (GHG) in atmosphere
 - Short-lived climate pollutant
 - Controlling methane has co-benefit of reducing global ozone concentrations
 - With new IPCC GWP reductions in methane will have greater benefits

Major Changes from Initial Draft

- Clarify soil moisture sampling requirements
- Clarify reporting period requirements
- Update the 16-run Monte Carlo simulation approach for GHG emissions quantification
- Update structure uncertainty methodology
- Update Monitoring Parameters table
- Clarify documentation requirements
- Clarify verification requirements
- Clarify record requirements for baseline period

Discussions and Clarifications

- How is a fallow year treated in the program?
- What is ARB's strategy in addressing DNDC model uncertainty for each rice growing region?

How is a fallow year treated in the program?

- Fallow year during baseline period
 - Need to identify whether a fallow year is part of the cultivation cycle
 - Data entered into the DNDC model accordingly
- Fallow year during project crediting period
 - Counted as a reporting period, need to submit an OPDR
 - Fallow year must be entered into the DNDC model accurately and be verified so in the next verification

How is ARB addressing DNDC structure uncertainty?

- Each rice growing region or sub-region has its own uncertainty deduction factor
 - Only variable is number of hectares by region
- ARB publishes hectares in each region annually based on protocol participation
 - Preliminary OPDR submitted within 4 months of end of reporting period
 - Complete OPDR submitted after ARB publishing hectares
 - Verification complete within 8 months of ARB publishing hectares

Managing Project Costs

- The first reporting period may include two cultivation years.
- Small projects (<25,000 MTCO₂e) may defer verification to include two rice years
- Authorized Project Designee (APD) may group together multiple projects for economy of scale when negotiating project cost
- Alternative method to simplify quantification of primary emission reductions (reduce computer run time from 13-14 hours/field to 1 hour/field)
- ARB contract for developing tool to simplify reporting and use of DNDC model

ARB Contract Quantification Tool

- Contract being reviewed by DGS
- Easy compliance with record keeping and quantification requirements
- Simplify data input
- Project quantification calculator
- Project record keeping file

Verification

- First proposed compliance offset protocol to rely entirely on modeled calculations not tied to direct measurement
- More specifications are added to current proposal
- Verification focuses on confirmation of project activity
 - Staff continues to seek input from verifiers on process

Protocol Timeline

- Discussion draft protocols for public comment: March and June 2014
- Informal comment period: June 20-29, 2014
- Release 45-Day Comment protocols: July 29, 2014
- 45-Day Comment period opens: August 1, 2014
- Board consideration: September 2014
- If approved, expected effective date: Jan 1, 2015

Environmental Analysis

- ARB prepares an Environmental Analysis (EA) for proposed actions which may result in significant impacts on the environment.
 - Prepared according to requirements of ARB's certified program under the California Environmental Quality Act (CEQA)
- The EA will be an Appendix to the Staff Report
- A **CEQA checklist** is used to identify and evaluate potential impacts to the environment.

Environmental Analysis

- The EA will include:
 - Beneficial Impacts
 - Foreseeable Methods of Compliance
 - Potential for Adverse Impacts
 - Feasible Mitigation Measures or Alternatives
- We welcome your input on the **appropriate scope and content** of the EA as it's developed
 - Foreseeable Methods of Compliance
 - Potential for Adverse Impacts
 - Feasible Mitigation Measures and Alternatives
- **Formal comment period for the EA begins** when the Staff Report is released with the 45-day proposed regulatory action notice

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