Monitoring pitfalls and obstacles in CDM projects from a DOE perspective

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BUREAU VERITAS

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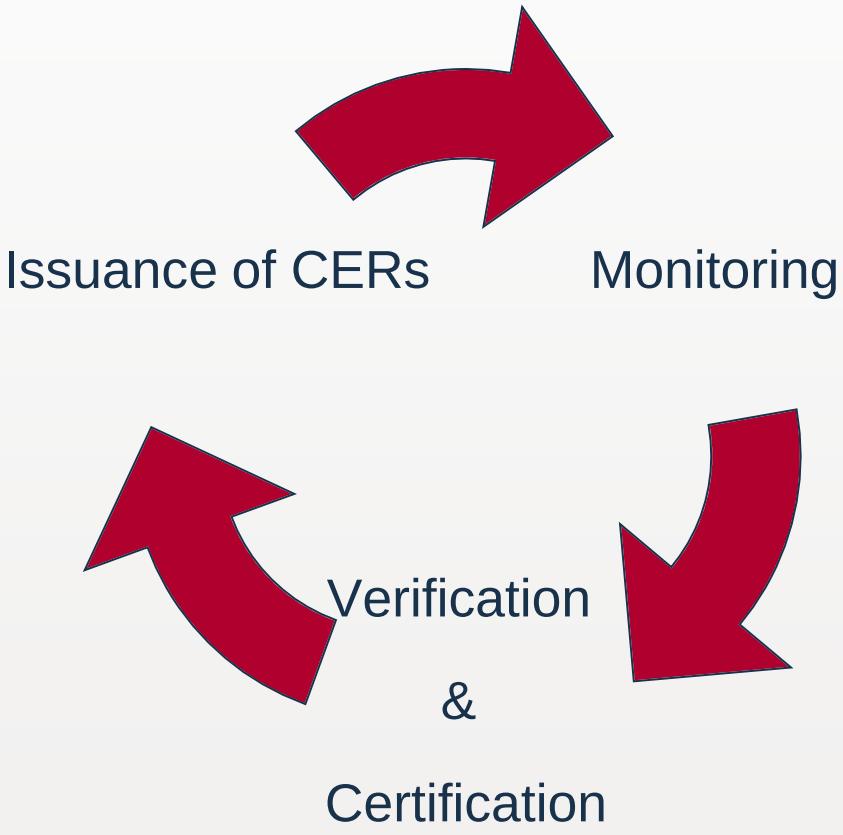
Bureau Veritas Certification

- Bureau Veritas's Profile
  - Founded in 1828.
  - Head office in Paris.
  - Expert in QHSE SA (Quality, Health, Safety, Environment and Social Accountability)
  - A worldwide presence in 140 countries.
  - Formerly known as 'BVQI'.
  - Known as DOE under initial BVCH – Bureau Veritas Certification Holding SA.
  - Accredited for all 15 sectoral scopes for both validation & verification.

- Bureau Veritas's Climate Change Service
  - CDM, JI, EU ETS
  - GS, VCS, etc.
  - ISO 14064 & GHG Protocol
  - Carbon Disclosure Project (CDP)
  - Airport Carbon Accreditation (ACA)
  - PAS 2050
  - CSR report assurance.
  - Word Commissioning of Dam (WCD).
  - FSC
  - Etc.

Verification Flow

CDM Project Registration



Verification Process Definition and Objective

- **Definition** : Periodic independent review and ex post determination by the DOE of the monitored reductions in anthropogenic emissions by sources of greenhouse gases that have occurred as a result of a registered CDM project activity during the verification period.

- **Objective** :

✓ Ensure the project has been implemented and operated as per PDD and physical features are in place (e.g., monitoring equipment, project equipment)

✓ Ensure the MR & supporting document are complete per the latest applicable version registered, verifiable and in accordance with applicable requirement.

✓ Ensure monitoring systems & procedures comply with the what described in MR and methodology.

✓ Evaluate the data recorded/stored per monitoring methodology.

Verification Methods

➢**Document Review** - - registered PDD (i.e., monitoring plan, any approved revised MR and/or changed from registered PDD), validation report, previous verification reports, monitoring methodology, MR, Others (e.g., national regulation, emission factors)

➢**On-site Assessment**

✓Project implementation & operation vs. registered PDD or approved revised PDD.

✓Information flows for generating > aggregating > reporting the monitoring parameters.

✓Interviews relevant people.

✓Cross check information in MR vs. data from other sources (e.g., logbooks, lab data).

✓Check monitoring equipment - - calibration performance, actual monitoring vs morning plan in PDD, etc).

✓Review calculation and assumption in GHG data and emission calculation.

✓Identify quality control and assurance procedures in place to prevent the errors or omissions in the reported monitoring parameters.

Verification – Key Requirements

- ❑ Is the project implemented according to the registered PDD (or approved revised PDD)?
- ❑ Is the project implemented according to the monitoring plan (or approved revised monitoring plan)?
- ❑ Do the monitoring activities comply with the registered monitoring plan?
- ❑ Does the monitoring plan comply with the monitoring methodology & applicable tools?
- ❑ Are the measuring instruments calibrated per frequency requirement?
- ❑ Are the data and calculations of GHG emission reductions achieved by/resulting from project by application of the selected approved methodology?

Obstacle in verification process (1)

- Non verifier-friendly spreadsheet
  - Complexity
  - Cell linkage
  - Correctness in computation
- Change in project design (compared to registered PDD)
  - Additional unit/facility/system
  - Completion of equipment installation
  - Changing in technology or measure

Obstacle in verification process (2)

- Non-compliance with registered monitoring plan
  - Sources of data
- Error in transferring data from primary sources (i.e., daily log sheet) to excel spreadsheet
  - Digit
  - Hand writing
- Information demonstrated during onsite visit
  - Availability of primary sources (log sheet, certificate, name plate, label)
  - Role of PPs/ CDM consultant

Materiality in Verification

- Materiality
  - error, omission or misstatement
- Materiality Threshold
  - 0.5% -> 500k tCO_2/yr
  - 1% -> between 300k to 500k tCO_2/yr
  - 2% -> < 300k tCO_2/yr
  - 5% -> small scale project activity
  - 10% -> micro scale project activity
- This concept will be exercised during onsite verification program

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