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Instruction: Enter your input in the table below.

Document reference number and title: A6.4-MEP006-A02. Concept note: Applicability of removal guidance to emission reductions activities and vice versa (version 01.0)				
Item	Section no. (as indicated in the document)	Paragraph/Table/Figure no. (as indicated in the document)	Comment (including justification for change)	Proposed change (including proposed text)
1	3.2.3	Paragraph 28	The monitoring requirements lack specificity regarding the integration of different monitoring technologies for activities that span multiple greenhouse gas reservoirs. The concept note should address integrated monitoring infrastructure design that can accommodate both emission reduction and removal activities simultaneously, including distributed sensor networks, satellite-based monitoring, and ground-based measurement stations.	Add clarifying text: "For activities involving multiple greenhouse gas reservoirs with different monitoring requirements, integrated monitoring infrastructure shall combine satellite-based remote sensing, ground-based sensor networks, and process-based modeling approaches. The monitoring system shall implement automated quality control procedures, cross-validation routines, and machine learning algorithms for pattern recognition and anomaly detection to ensure data consistency across different measurement approaches."

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2	3.2.4	Paragraph 29	The reporting requirements need enhancement to address data harmonization protocols and interoperability standards for dual-standard activities. Current provisions do not adequately address the complexity of managing heterogeneous data streams from multiple monitoring technologies.	Modify paragraph 29 to include: "Reporting systems shall implement metadata-driven data architectures with standardized formats based on internationally recognized protocols. Data harmonization shall ensure measurements from diverse sources can be integrated into unified analytical frameworks, employing blockchain technology for immutable data provenance tracking and automated verification protocols for transparency and audit requirements."
3	3.2.5	Paragraph 30	Post-crediting period monitoring lacks guidance on automated systems and scalable architectures for long-term data management. The provisions should address cloud-native technologies and microservices patterns for handling varying data volumes and processing requirements.	Add to paragraph 30: "Post-crediting period monitoring systems shall implement automated scheduling frameworks, cloud-native architectures with horizontal scaling capabilities, and edge computing for remote locations. Systems shall employ sequential analysis techniques for early warning, statistical process control for performance monitoring, and automated backup procedures for long-term data preservation across multi-decade timeframes."

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4	4. Impacts	New section after paragraph 38	The concept note should address technical implementation challenges for integrated monitoring and verification systems, including system architecture requirements, scalability considerations, and technology integration pathways.	Add new section: "Technical Implementation Framework: Implementation of cross-standard requirements necessitates integrated monitoring architectures with the following technical specifications: (a) distributed processing frameworks using Apache Spark for batch and stream processing; (b) container orchestration systems using Kubernetes for automated deployment and scaling; (c) API gateway systems for external integrations with standardized RESTful interfaces; (d) polyglot persistence with time-series databases for sensor data and document stores for methodological documentation; and (e) comprehensive security frameworks implementing defense-in-depth strategies with multiple protection layers."
5	3.1.9	Paragraph 19	The data sources and monitoring requirements should acknowledge integrated sensor networks that can serve multiple monitoring objectives simultaneously, optimizing costs while maintaining data quality through economies of scale.	Add to paragraph 19: "Monitoring systems shall be designed to maximize synergies between different data collection requirements. Integrated sensor networks employing cavity ring-down spectroscopy, photoacoustic spectroscopy, and electrochemical sensors shall simultaneously collect data satisfying multiple monitoring objectives across emission reduction and removal components, implementing adaptive sampling strategies and redundant communication pathways for continuous connectivity."

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