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Dear Supervisory Body:

Thank you for the opportunity to respond to this critical work of defining Removal activities under the Article 6.4 mechanism.

### 1) **Technology-Neutral BiCRS**

I would advocate the explicit inclusion of the category BiCRS (Biomass Carbon Removal and Storage; [Sandalow et al., 2021](#)) in a method-neutral fashion. BiCRS combines the advantages of natural photosynthesis and human engineering to achieve efficient carbon removal.

### 2) **Wood Harvesting and Storage (WHS) as an example**

At one end of the spectrum of BiCRS is a method termed Wood Harvesting and Storage (WHS; [Zeng 2008](#); [Zeng and Hausmann 2022](#)) that uses all the raw biomass feedstock for removal. Wood Vault (WV) is the specially engineered structure that durably stores sustainably sourced coarse woody biomass. The science can be summarized as a ‘reverse coal’ process in which carbon in the form of woody biomass is taken out of the “fast” photosynthesis-decomposition biotic carbon cycle and transferred to a “slow” geological carbon cycle via human engineering. Wood Vault is a hybrid nature-engineering method of long duration carbon removal that is low-cost and highly scalable. CO<sub>2</sub> is captured by trees using the natural process of photosynthesis. We can bury all the raw wood with a high carbon efficiency (>90%).

High durability (1000+ years) is achieved by burying CWB in an anaerobic subterranean environment several meters below ground, away from the active biosphere (vegetation, soil, and decomposers) that's typically limited to the first meter of the soil profile. Wood Vault co-benefits include: Beneficial valorization of unmerchantable woody biomass residues from fire thinning and other forest management; mine reclamation; creation of good green jobs and support for rural development.

WHS does not require unknown technology. WHS uses well established engineering practices (transportation, construction) and ‘can be easily applied’ ([National Academy of Sciences, 2019](#)). It can be scaled to megatonne in the next few years, and gigatonne in the 2030s.

Sincerely,

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