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Written testimony of David Antonioli, Chief Executive Officer, Verra, for the hearing, "Voluntary Carbon Markets in Agriculture and Forestry", of the House Agriculture Committee, on September 23, 2021

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Chairman Scott, Ranking Member Thompson, and distinguished members of the Committee:

Thank you for the opportunity to provide testimony for the hearing "*Voluntary Carbon Markets in Agriculture and Forestry*".

My name is David Antonioli, and I am the Chief Executive Officer of Verra, a nonprofit corporation under the laws of the District of Columbia and a tax-exempt organization under Section 501(c)(3) of the U.S. Internal Revenue Code.

Founded in 2007, Verra certifies the impacts of environmental and social activities. We manage the world's largest voluntary carbon crediting program: the Verified Carbon Standard (VCS) Program.

To date, the VCS Program has issued 760 million carbon credits from 1,733 projects in over 80 countries. This includes 28.1 million carbon credits from 93 projects in the United States of America. Each of these carbon credits represents one tonne of greenhouse gas that has been reduced or removed from the atmosphere.

In providing this testimony, I aim to convey three messages. The first is to explain how high-integrity carbon crediting programs operate. The second is to outline how voluntary carbon markets are evolving in the United States and globally. The third is to identify specifically how participation in voluntary carbon markets can benefit the American agriculture and forestry sectors.

1. High-integrity carbon crediting programs

A high-integrity carbon crediting program, such as the VCS Program, involves multiple processes aimed at ensuring that the carbon credits it creates represent real emission reductions or removals. In this testimony I focus on two of these processes.

The first is registration. In this process, one or more entities propose the implementation of an activity, known as a "project", to reduce or remove emissions from the atmosphere. These project proponents must describe what this project will undertake, and this project can be in almost any sector of the economy and involve almost any type of activity — for example, planting trees or changing an agricultural practice. They must also identify what emissions would be in the absence of this project — in other words, the baseline level of emissions under

a business-as-usual scenario. Finally, they must calculate the projected difference between the baseline emissions and the estimated emissions.

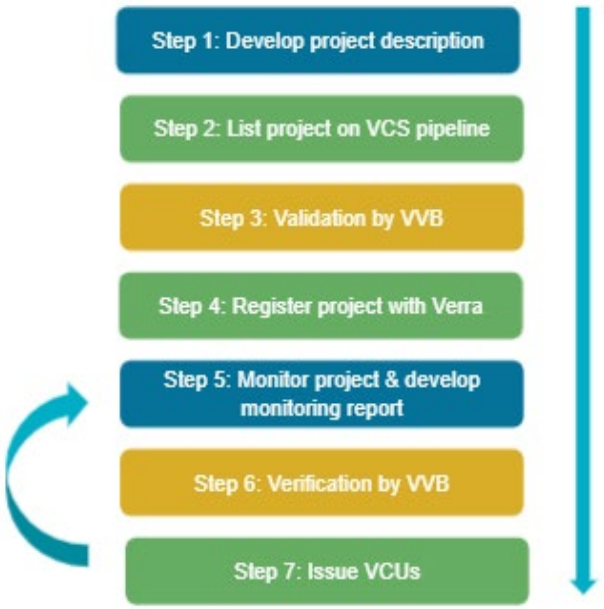
The project proponents must submit a document setting out how the project meets the VCS Program requirements to an accredited, independent auditor, who scrutinizes the document to ensure that the project meets all program rules, which are developed with extensive scientific input and thorough public consultations. If the auditor approves, Verra then conducts an additional review and, if Verra also approves, the project can be formally registered.

All that said, registration alone is insufficient to create carbon credits. To create carbon credits, a second process, known as issuance, must be completed.

In the issuance process, and provided that the project has been successfully registered, the project proponents must actually implement their project: they must plant the trees, or they must change the agricultural practice that they committed to. The project proponents must also measure the emissions that they are reducing or removing as a result of their project activities.

Once again, the project proponents must submit their findings, in the form of a monitoring report, to an accredited, independent auditor, who scrutinizes the report to ensure that the project, again, meets all rules of the VCS Program. If the auditor approves, Verra then conducts an additional review and, if Verra also approves, Verra will create, or "issue", carbon credits corresponding to these emissions reductions and removals.

Graphic 1: Project cycle



Upon issuance, carbon credits have many possible uses. The most common use of carbon credits issued by the VCS Program ("Verified Carbon Units" or "VCUs") is the retirement of these units by corporations that wish to compensate for their corporate emissions (e.g., for travel, or for electricity consumption that cannot be provided by renewables) voluntarily and report this compensation in their annual and/or sustainability reports. VCUs can also be retired to satisfy compliance obligations in jurisdictions where they are accepted. Retiring a carbon credit means it is removed from the market and cannot be used anymore by anyone other than the retiring entity.

I describe the above processes because I wish to clarify the attributes that we believe are crucial in ensuring the high integrity of carbon credits. These include:

- **Accounting Methodologies**: Projects and carbon credits must be assessed using a technically sound methodology to accurately quantify emission reductions and removals.

    - In the agriculture sector, Verra has approved six (6) methodologies that quantify changes in soil organic carbon stocks and nitrous oxide and methane emissions. Management practices covered by these methodologies include improved cropland and grassland management such as reduced tillage, cover cropping, and rotational grazing. Our most recent methodology covers most of these practices and was developed with the support of US company Indigo Ag. We also recently approved an accounting methodology that quantifies reductions in methane emissions through the use of a food additive that helps inhibit the microbes in a cow's stomach.

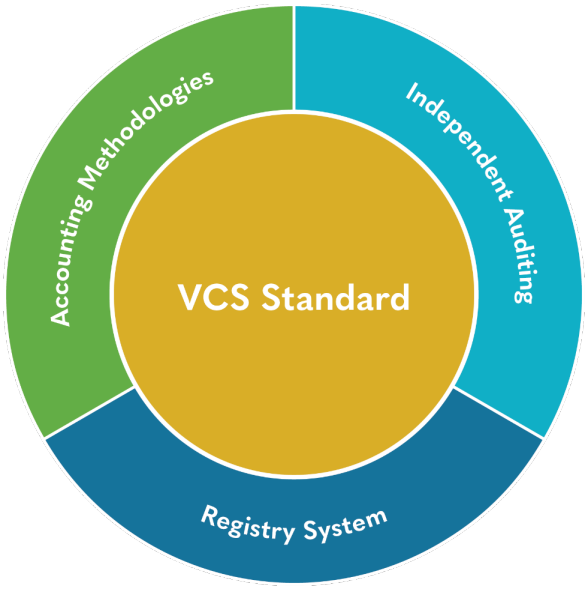
    - In the forestry sector, Verra has approved fourteen (14) methodologies that span improved forest management, conservation, reforestation, and avoided deforestation. We are working with various US public and private entities on a new methodology that uses fuel treatments (thinning, prescribed fire, and managed natural fire) to reduce the risk of large-scale stand-replacing wildfires, and increase forest resiliency to withstand increased threats.

- **Independent Auditing:** Carbon credits must come from projects that have been assessed by qualified independent third parties, with a second check applied by the crediting program, to ensure that standards are met and that methodologies are correctly applied. This takes place initially at project registration and then upon every instance of credit issuance. Verra works with the ANSI National Accreditation Board (ANAB) to accredit US and internationally-based auditors. We currently have six auditors accredited for the VCS Program based in the United States and have accredited a total of 27 auditors around the world. This accreditation is done against International Organization for Standardization (ISO) standards for accreditation for GHG auditing organizations to ISO 14065 We work with national auditing bodies such as the Standards Council of Canada, the Mexican Accreditation Entity EMA, and other anchor

partners in Colombia and South Africa, which will soon be complemented with partners in Europe, Asia and South Asia.

- **Registry:** Registrations and issuances must be tracked to ensure transparency and to prohibit the double-counting of carbon credits. Verra operates a registry, which records projects at all stages of the registration process, records every carbon credit that has been issued, and records how these carbon credits are transferred and ultimately used (i.e., retired). To obtain an account in the Verra registry, we apply robust Know Your Customer checks.

Graphic 2: Components of the VCS Program



In short, carbon credits issued by Verra under the VCS Program follow a rigorous assessment process to be certified. They originate from projects in various sectors, with agriculture and forestry being the largest. Crucially, they must adhere to transparent and robust methodological standards, be independently audited, and be tracked in a publicly accessible, secure registry.

2. Evolution of voluntary carbon markets

Before outlining how voluntary carbon markets are evolving in the United States and globally, I wish to express a critical reminder.

The world is facing a climate emergency. Under our current emissions trajectory, global temperatures are expected to rise to 2.7 degrees Celsius above pre-industrial levels by the end of the century, with devastating consequences including rising sea levels, devastating floods caused by severe rainfall, and destructive wildfires fueled by extended periods of drought, all of

which put communities at risk, including here in the United States. To avert this calamity, we must do all that we can to limit the temperature increase to 1.5 degrees Celsius above pre-industrial levels.

In practice, this means cutting global emissions by one half by 2030, and then eliminating remaining global emissions to zero by 2050. In numerical terms, that means cutting over 27 billion tons of carbon dioxide, or its equivalent in other greenhouse gases, in the next nine years.

To date, the quantity of emissions that have been reduced or removed through voluntary carbon markets is a small portion of that amount. Yet voluntary carbon markets provide built-out, ready-made infrastructure for identifying opportunities to cut emissions and to quantify the impacts of these opportunities. It can be scaled up rapidly to meet the demand that has finally arrived. For this reason, it is widely argued that voluntary carbon markets must scale up rapidly over the coming decade. The Taskforce on Scaling Voluntary Carbon Markets (TSVCM), led by United Nations Special Envoy on Climate Action and Finance Mark Carney, who is also the former Governor of the Banks of Canada and England, argues that voluntary carbon markets must be scaled up fifteen-fold by 2030.

At Verra, we are seeing this growth already starting to take place. Corporations around the world are increasingly recognizing the importance of cutting their emissions. Many are reducing their carbon footprints through energy efficiency, purchasing of renewable energy and other measures. Quite often, however, these entities cannot meet their targets or eliminate their carbon footprints altogether, at least in the near term, with internal reductions alone. They need a flexible mechanism to achieve these aspirational goals. By using voluntary carbon markets, corporations can complement internal reductions and neutralize or offset their emissions by retiring carbon credits generated by projects that reduce emissions elsewhere.

Today's voluntary carbon market is a robust and effective means to tackle climate change with the international validation provided by international certification bodies like Verra, strong corporate awareness, and market growth. Leading scientists, private practitioners, community members, landowners, and decision-makers from all corners of the world have engaged in voluntary carbon markets, mainstreaming this increasingly robust and accepted tool for driving finance to reducing emissions.

As an example of this mainstreaming, consider that the infrastructure provided by voluntary carbon markets is increasingly being used to support jurisdictional efforts to address climate change. Taxes established in Colombia in 2016 and South Africa in 2020 permit the use of high-integrity carbon credits, such as those issued by Verra's VCS Program, to meet compliance obligations. Specifically, companies in those countries can retire eligible carbon credits (such as VCUs) instead of paying the carbon tax. The International Civil Aviation Organization (ICAO) established the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), a global market-based mechanism in which airlines and other aircraft operators will offset any

growth in their CO_2 emissions above 2020 levels with the use of carbon credits generated by organizations like Verra

Governments have also supported the use of voluntary carbon markets as a means to help companies achieve ambitious non-regulatory climate targets while also helping to drive finance towards climate action. For example, Australia manages the National Carbon Offset Standard (NCOS) which sets minimum requirements for calculating, auditing and offsetting the carbon footprint of an organization or product to achieve 'carbon neutrality', and provides guidance on what is a genuine, additional voluntary carbon credit.

I express the above viewpoints to illustrate that the voluntary carbon market is evolving rapidly, is entering the mainstream, and is emerging as the instrument of choice for helping corporations and increasingly governments around the world to address greenhouse gas emissions.

3. Benefits for American agriculture and forestry sectors

From Verra's perspective, there is a significant opportunity for scaling up the supply of carbon credits from the American agriculture and forestry sectors in order to meet corporate demand, both at home and abroad. We base this statement on the following observations.

The first is that nature-based solutions, such as agriculture and forestry, represent a unique opportunity to reduce emissions in the near term. Technological solutions such as carbon capture and use or sequestration (CCUS), or direct air capture (DAC), hold significant promise, and at Verra we are directing considerable time and effort to facilitating their growth. However, the reality is that these solutions are currently very expensive to operate, and they will take considerable time to scale up.

The second is that nature-based solutions provide multiple other benefits. To begin, they can provide additional income to those on the frontlines of climate action, such as farmers and forest owners who can use the voluntary carbon market to help them cover the costs associated with new practices. In addition, nature-based solutions can improve water quality, prevent erosion, and strengthen biodiversity. These additional benefits are increasingly quantified and verified, and they can help meet environmental justice and other local priorities.

The third is that there is considerable scope for innovation in agriculture and forestry. For example, Verra recently launched a public comment period for a methodology being developed to quantify emissions reductions and removals via biochar in soils as well as non-agricultural applications like asphalt and cement. Verra is also in conversations with agricultural technology companies about supporting the use of innovative fungal inoculants and other probiotics to reduce synthetic fertilizer needs, thereby reducing nitrous oxide (N_2O) emissions, another potent greenhouse gas. The voluntary carbon market provides a mechanism for driving private finance to climate action projects that would otherwise not get off the ground due to cost or technological limitations.

The fourth is that the voluntary carbon market provides a route-to-market for American farmers and forest owners. Given the scaling of global demand, the time is ripe to facilitate their access to ready-made infrastructure to reward them for cutting emissions and to enable them to sell these credits to markets at home and abroad, and high-integrity carbon crediting programs such as Verra's VCS Program can help to provide this opportunity.

Thank you for your consideration of my testimony, and I look forward to your questions.