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*Submitted electronically*

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**RE: CARB Enforcement Division's Review of the San Joaquin Valley Air Pollution Control District's Emission Reduction Credit Program**

Chair Nichols and members of the California Air Resources Board,

On behalf of the Central Valley Air Quality Coalition (CVAQ) and undersigned member organizations, please accept these comments on the findings from the enforcement division's program review of the San Joaquin Valley Air Pollution Control District's (Valley Air District) Emission Reduction Credit (ERC) program. The CARB enforcement division's findings reveal a pattern and practice of the Valley Air District over-crediting themselves and polluting industries with reductions, equating to higher levels of pollution in the San Joaquin Valley and with a disproportionate impact on communities of color and low income communities that are in close proximity to major pollution sources. We strongly believe that these findings are sufficient to warrant a complete overhaul of the entire ERC system and elimination of the special agreement with the United States Protection Agency (USEPA) regarding the equivalency demonstration. These issues and requests are discussed in further detail below.

**Background**

The San Joaquin Valley is classified as extreme nonattainment of the National Ambient Air Quality Standards (NAAQS) for 8-hour ozone and nonattainment for the annual and 24-hour PM 2.5 standards. According to a 2008 CSU Fullerton study, the health-related impacts of air pollution in the San Joaquin Valley drains the region's economy of approximately \$6 billion every year, or an average of \$1,600 per person annually. These costs are tied to adverse health outcomes and represent hundreds of premature deaths, tens of thousands of asthma attacks, thousands of cases of bronchitis, and thousands of lost work and school days. Despite these dire circumstances, the Valley Air District has continued to issue permits for new or expanded operations of polluting facilities utilizing Emission Reduction Credits (ERCs) the United States

Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have previously determined to either be invalid, or grossly overestimated. These outdated ERCs have been raised as a problem by clean air advocates for decades.

Concerns about the use of ERCs arose again in 2016, when Valley Air District staff indicated that the nitrogen oxides (NOx) bank was in serious danger of failing the equivalency demonstration. Around the same time, Earthjustice was reviewing permit applications from major sources and found some that included old and questionably sourced credits. After conversations with CARB staff, advocates were asked to provide additional evidence of problems with ERCs. Subsequently, Earthworks conducted an initial assessment of select ERC certificates, resulting in the November 2018 report “Undeserved Credit: Why emissions banking in the San Joaquin Valley puts air quality at risk.” This report highlighted the difficulty of tracing emission reduction credit certificates over time, since the majority are decades old and ERCs can be split or sold. More importantly, the “Undeserved Credit” report raised serious concerns about the value and validity of the credits examined, particularly in light of the fact that they do not lose value over time even when their origins and values cannot be verified. Additionally, the report pointed to concerns about the lack of transparency in how the equivalency demonstration is determined. As a result of this report and clean air advocates’ multi-year efforts to shed light on these issues, in January 2019 CARB directed staff to conduct a thorough review of the ERC program managed by the Valley Air District.

Inaccuracies and loopholes in the ERC program have serious implications for the San Joaquin Valley air basin’s ability to attain the health-protective standards for major pollutants like particulate matter and ozone. Furthermore, these findings have important implications for similar banking style systems used around the world in exposing the potential for corruption in the system to the benefit of polluting industries and at the expense of people’s health.

### **Findings from CARB program review**

CARB enforcement division’s review of the Valley Air District’s Emission Reduction Credit program validated the original findings of the “Undeserved Credit” report and further uncovered egregious errors within the equivalency demonstration that were not previously known because the database used to calculate the demonstration is not publicly accessible.

#### ***Emission Reduction Credits (ERCs)***

The findings in the CARB staff report validate what was documented in “Undeserved Credit” regarding overvalued credits and credits issued under circumstances that do not pass the 5 criteria of real, quantifiable, enforceable, surplus, and permanent. The CARB staff report additionally exposes previously unknown problems with ERCs, as well as serious issues with the associated equivalency demonstration, which is discussed further in the next subsection.

The two main issues related to ERCs documented in the staff report are related to the application of rules regarding “timeliness” and “surplus” designation. Multiple cases were found in the review where ERCs were issued more than 180 days after shutdown of the facility. Ultimately, inconsistent interpretation of “timeliness” allowed industry to select a baseline period with

higher emissions, resulting in credits with higher values than if the rules were properly applied. Whether an application is timely also relates to whether the reduction qualifies as surplus. Rules dictating what qualifies as a “surplus” reduction were not followed in regard to federal, state, and Valley Air District regulations for several of the Emission Reduction Credits reviewed.

Many of the credits in the Valley Air District’s ERC banks are old, and given rule and regulatory updates in the interim, would have much lower to no value today. More than half of NO<sub>x</sub> and VOC ERC’s are pre-1992 and lack documentation. As per CARB staff’s review update issued on September 5, 2019, “the majority of VOC (89%) and NO<sub>x</sub> (85%) ERCs remaining in the bank unused today are based on emission reductions that occurred more than 20 years ago” (page 6). In 2016, a Valley Air District staff report estimated that NO<sub>x</sub> ERCs, when valued at time of use, were worth about 18% of the time of issuance value, meaning that going to time of use valuation would take away around 80% of their value.

*Recommendations:* ERCs that were not issued according to “timeliness” and “surplus” designations in the Clean Air Act must be eliminated or adjusted to their true value. For certificates that pre-date the establishment of the Valley Air District, their age alone makes their value and permanence questionable for offsetting emissions today. Credits within the system may need to be zeroed out, or at a minimum must be significantly discounted, in order to make up for shortfalls from invalid or overvalued credits as well as from overvalued reductions included in the equivalency demonstration.

The equivalency demonstration is a critical piece of the puzzle in discerning how much of a gap there is between needed reductions and the values currently within the Valley Air District’s ERC program.

### ***Equivalency Demonstration***

The Valley Air District and CARB’s special agreement with the United States Environmental Protection Agency (USEPA) regarding the New Source Review (NSR) rule is key to understanding the overall Emission Reduction Credit program and the significance of the systemic problems uncovered. Federal NSR requires “time of use” valuation of ERCs, meaning that the value of a credit is “discounted” if an intervening rule or law between when the credit is issued and when it is used makes the emission reduction required instead of “surplus.” The Valley Air District and CARB entered into a special agreement with USEPA allowing the Valley Air District to value credits at “time of issuance,” meaning the credits never lose value over time.

The Valley Air District is required to demonstrate that its “time of issuance” approach results in equally or more stringent emissions reductions. This demonstration is done by annual tracking and reporting, to CARB and USEPA, of the quantity of credits that would have been required under the federal NSR rule compared to under District Rule 2201. By making up the shortfall for these old credits through the equivalency demonstration, the Valley Air District is accepting liability for the assumed reductions. To make up the shortfall between required reductions and banked credits, the Valley Air District has come to rely heavily on claiming reductions from electrification projects and orphan shutdowns (operations that cease and no entity applied for credits).

Specific to the equivalency demonstration, CARB staff's review revealed the same pattern of overvaluing emission reductions and lack of documentation inhibiting the ability to replicate the calculations contained in the database used to demonstrate equivalency.

*Regarding the value of emission reductions used to demonstrate equivalency:*

As with the review of ERCs, the review of projects used in the equivalency demonstration was a subset of orphan shutdowns and electrification projects, so the results are only an indication of the deep-rooted problems in the overall system.

Just one egregious example of questionable crediting and miscalculation, that in this case was admitted to by the Valley Air District, relates to reductions claimed from conversion of agricultural internal combustion engines (AG-ICE) to electric. Emission reductions from the conversion of agricultural internal combustion engines (AG-ICE) to electric were overvalued by 35% due to the use of an incorrect "load factor." In 2001, the Valley Air District claimed or booked reductions from 919 of these diesel to electric projects and used these reductions to demonstrate 77% of equivalency offsets during the years 2001 to 2018 (predominate use was during the years 2008-2018). Since credited reductions were overvalued by at least 35%, that means around 27% of reductions claimed in the NOx equivalency demonstration during those years is nonexistent.

In addition to the incorrect load factor used to calculate total emission reductions resulting from the AG-ICE replacements, there are three significant issues that suggest they should have never been used in the first place for equivalency demonstrations:

1. AG-ICE replacements are not connected to a permit; rules say only permitted actions can be used to generate credits.
2. The use of Carl Moyer funding for some of these replacements means that those emission reductions belong to the Carl Moyer program.
3. The reductions have to be permanent; Carl Moyer rules do not require permanence.

For these reasons, it is likely that none of the NOx credits from this incentive program should have been used in the equivalency demonstration.

CARB staff's review also shows that reductions from orphan shutdowns were routinely overvalued (ten out of eleven projects reviewed). One randomly selected project in the report was given 528.8 tons of VOC credit, but CARB calculations show it should have been 0 tons, or at most 25 tons. Nine randomly selected orphan shutdowns providing NOx credits show the district calculated 22.47 tons of reductions but CARB calculated only 3.77 valid tons. If these findings are generally true of all orphan shutdown credits, the Valley Air District may have overestimated the associated credits by as much as six times their actual value.

From the above examples, it is clear that the Valley Air District falsely claimed NOx and VOC credits in equivalency demonstrations during at least during the past ten years. Correcting the mistakes detailed in CARB staff's report would leave a deficit on remaining credits for future demonstrations after 2018. The tables from the staff report most relevant to these comments are below.

**Table 11: NOx Reductions Used and Remaining by Type for Surplus-at-Time-of-Use Equivalency 2001 – 2018. (All values are tons per year from Track\_Master Table.)**

Type of Reduction	Amount Used as Mitigation (used_nox)	Remaining Reductions Available for Future Equivalency Demonstrations (r_nox)
Emission Reduction Credits	720.7	160.6
Electrification Projects	1,210.7	0
Orphan Shutdowns	122.5	273.8
Totals	2,053.9	*434.4

\*Unused Carry-Over Reductions in 2018 Report = 434.0 tons per year NOx

**Table 14. Orphan Credit Comparison between CARB and District Staff for Mitigations Used in the 2018 Report<sup>60</sup>**

Track Number	NOx (tons per year) District Database	NOx (tons per year) CARB Calculated	VOC (tons per year) District Database	VOC (tons per year) CARB Calculated
2011-S-9990046-4884	-	-	525.8	0
2013-C-9990512-5391	0.59	0.28	7.14	3.14
2013-S-9990204-5386	2.63	0.83	0.17	0.05
2010-C-9990263-4278	1.0	0.3	0	0
2010-C-9990583-4282	1.2	0.04 or 0.09	1.3	0.08
2004-S-9990252-1439	0.6	0.07 or 0.21	0.11	0.003 or 0.11
2015-N-9990290-6076	0.75	0.70	0.15	0.15
2015-S-9990494-6077	0.63	*	0.14	*
2017-C-9990646-6593	9.74	1.36	2.29	1.28
2018-C-9990445-6878	1.93	0	0.41	0
2018-C-9990547-6880	4.03	0	0.37	0

\*CARB staff did not have the information to verify the District's value.

*Regarding the database and documentation used to demonstrate equivalency:*

The Valley Air District has known since at least 2016 that their NOx bank was at risk of failing the equivalency demonstration. Looking only at the numbers from the CARB staff report, which is a review of 10% of existing ERC certificates and a subset of orphan shutdown and electrification projects, it is likely the equivalency demonstration would have failed many years ago. CARB staff noted in several places that they were unable to replicate the Valley Air District's calculations, even with access to available documentation and with support from District staff. The Valley Air District's next annual equivalency demonstration is due in November 2020. We are gravely concerned that the necessary corrections and enhancements to the database and associated documentation used to calculate the equivalency demonstration will not be addressed in time to ensure the integrity of the results.

Communities across the San Joaquin Valley deserve answers as to the implications of these findings for existing permits and clean-up plans that rely on incorrect information. While we recognize the complexity of these issues and the many stakeholders that need to be involved in

deciding and implementing appropriate remedies, these issues have lingered for far too long and immediate actions must also be taken where feasible.

*Recommendations:* The equivalency demonstrations for NO<sub>x</sub> and VOCs have, for at least the past ten years, used incorrect numbers that, if corrected, will not meet the requirements of the Clean Air Act. Given the consistent, well documented pattern of errors and irregularities in the records that do exist for ERCs and the associated equivalency demonstrations, the Valley Air District should no longer utilize an equivalency demonstration that allows for valuation at “time of issuance.” Failure to pass the equivalency demonstration invalidates the special agreement with USEPA, meaning that all ERCs are converted to “time of use” valuation. Credits valued at “time of use” make the polluter accountable for the cost of increased emissions, requiring that they take on the risk of failing to meet required emissions levels rather than the Valley Air District. Shifting the burden from taxpayers to polluters would represent justice for impacted communities.

The ERC program is nested within the New Source Review (NSR) rule. Calculations from the ERC program are therefore part of the commitments that go into State Implementation Plans (SIPs). These plans must also be reviewed in light of this new information and any shortfalls compensated for.

### ***The Greenhouse Gas bank***

More recently, in addition to the ERC banks for criteria air pollutants, the Valley Air District created a bank for greenhouse gases (GHGs). Though created more recently than the ERC banks for criteria pollutants, the GHG bank consistently shows the same issues found in the other banks regarding lack of documentation and integrity, making them invalid. Though as far as we know these credits have not been used, we do not agree with a “no harm, no foul” approach.

*Recommendation:* This banking of GHG emission reductions must be eliminated. No other air district has a similar program. California Environmental Quality Act (CEQA) issues around increases of GHG emissions from local projects must not be compromised, for example, by a project paying off an oil company for their pre-2007 project shutdowns for GHG emissions generated more than a decade later. Instead, local residents have the right under CEQA to ask developers to offset new sources of GHG emissions with local mitigations such as charging stations for electric vehicles and solar panels on parking lots. These banked GHG emission credits could take away that right. For these reasons, the bank for greenhouse gasses should be eliminated.

### **Requests and Benchmarks**

While fully understanding and addressing the full breadth and depth of these problems will take time, transparency, and rebuilding the trust necessary to support a collaborative approach to solving the immense problems the San Joaquin Valley faces in cleaning the air, immediate actions must also be taken to fix long standing problems that the CARB staff report provides further evidence of. Participation in a public working group cannot be a catch-all solution, and numerous other conversations and commitments are necessary.

To that end, CVAQ suggests the following immediate actions and longer time solutions:

- Invalid credits should be eliminated. Several credits documented in the “Undeserved Credit” report have a long paper trail, including documents from CARB and USEPA disputing the validity of those credits, a debate that must finally be put to rest by retiring them.
- Old credits whose authenticity is in dispute should be heavily discounted. Many credits lack adequate documentation, so it should not be assumed that reported values are correct.
- The GHG bank should be eliminated. This bank shows the same problems the other banks are riddled with. Furthermore, GHGs are regulated by the state.
- If previous equivalency demonstrations for NO<sub>x</sub> and VOCs were adjusted using just the information detailed in the CARB staff report, those banks have likely failed to pass the equivalency demonstration. The Valley Air District must return to the federal New Source Review rule, meaning all credits are valued at “time of use” rather than “time of issuance.”
- The CARB staff report is “statistically significant” and while it provides enough information to conclusively show systematic problems, it is not a comprehensive review, leaving many ERC certificates, other criteria air pollutant banks, as well as assumptions in equivalency demonstrations unreviewed or otherwise unverified.
  - While determinations are being made about how best to address the shortfalls in reductions discovered thus far, the Valley Air District should suspend review of any permits that use Emission Reduction Credits rather than direct mitigation.
  - Unreviewed credits and projects as well as the remaining criteria pollutant banks not reviewed as part of this report must be reviewed and corrected, or through extrapolation of CARB staff’s findings, credits discounted proportionally using a mutually agreed upon percent. Existing operations reliant on these credits should be responsible for finding additional mitigations. The specific details of how to address unreviewed credits, projects, and banks could be discussed and vetted by the public working group. Actions must be overseen by CARB and USEPA.
- Implications for State Implementation Plans and attainment of the NAAQS must be fully assessed and addressed. This work should be undertaken collaboratively by USEPA, CARB, and the Valley Air District and reported to the public.

To ensure these efforts result in expeditious action, CARB should receive periodic progress reports and work with the Valley Air District to establish metrics for satisfactory progress on all of the above. The Valley Air District should provide specific details on the public working group, such as how frequently it will meet, its proposed composition, and a timeline with benchmarks detailing what the group is expected to achieve. The enhancements and upgrades to the equivalency demonstration database and supporting documentation should be made to align with the federal NSR rule. A timeline with benchmarks for these upgrades and enhancements should be provided in writing. Alternative remedies or other consequences should be established if these metrics are not met.

## Conclusion

Our primary, immediate, and urgent concern is reducing air pollution and environmental injustices in the San Joaquin Valley. More broadly, the issues with the Valley's Emission Reduction Credit program are relevant to similar types of systems such as California's cap and trade program and other systems across the globe touted as mechanisms for raising funds while promoting innovation and reducing emissions. In reality, credit based systems are rife with potential for human error, inaccuracies, and, as in this case, bending or breaking the rules to favor polluters.

With the Valley Air District's special agreement allowing credits to retain their original value indefinitely, the taxpayer is on the hook for making up the gap in emissions caused by the devaluation of credits over time. Taxpayer dollars are used to fund the Valley Air District, and the agency in turn has made itself responsible for reductions that polluting industries should be achieving. The Valley Air District is allowing some of the region's largest sources of pollution to "cash in" old credits that never lose value, many of unverifiable origin or value, while the Valley Air District makes up the difference. In making up this difference, CARB staff's review indicates that the Valley Air District has subsequently heavily relied on using credits within the equivalency demonstration that are also invalid or overvalued--the same problems evident with the credits themselves.

The Emission Reduction Credit program has clearly failed to expedite cleaning the air in the San Joaquin Valley. Given the severity of air pollution problems and environmental injustices in the Valley, these types of glaring errors and loopholes must be closed immediately. To achieve clean air and allow kids to safely play outside every day, the San Joaquin Valley air basin does not have room for dubiously derived, decades-old "credits" in its air pollution reduction budget. The current ERC program has proven to be highly subject to corruption and manipulation. Overall, the ERC program in the San Joaquin Valley is not functional, especially without vigilant oversight continually ensuring that rules are followed and verifying that assumptions about reductions are true. Public health has been harmed.

Systems that perpetuate injustice must be dismantled and replaced with life affirming systems that protect people and the planet while providing safe jobs with a living wage, with priority for clean-up and "green," sustainable and equitable investment focused on disproportionately impacted Black and Indigenous people, people of color, and low income communities.

We sincerely thank CARB staff, particularly in the enforcement division, for the thorough review of the Valley Air District's ERC program. While the review was not comprehensive, it provided ample evidence of how broken the Valley Air District's ERC program is. We must now act in proportion to the weight of evidence that there are fundamental, systemic problems with the Valley Air District's current program.

CVAQ and partners will continue our active engagement in conversations about how to rectify these problems, including through the public working group the Valley Air District has committed to convening. CVAQ remains steadfast in our mission to protect public health and achieve clean air for the San Joaquin Valley, with special attention to disproportionately



impacted environmental justice communities, and to ensuring that the public can meaningfully engage in decision making processes related to creating clean air.

Sincerely,

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Association of Irrigated Residents

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