



October 16, 2024

California Air Resources Board
1001 I Street
Sacramento, CA 95814

Via electronic submission: <https://ww2.arb.ca.gov/lispub/comm/bclist.php>

Re: Second Notice of Public Availability of Modified Text and Availability of Additional Documents and/or Information: Proposed Low Carbon Fuel Standard Amendments

To Whom it May Concern:

Sustainable Advanced Biofuel Refiners (SABR) Coalition appreciates the opportunity to comment on the California Air Resources Board's (CARB) proposed changes to the Low Carbon Fuel Standard (LCFS) program – Second 15-Day Changes. SABR is a national biodiesel trade association made up of nearly sixty organizational members from virtually every state including California. SABR's members have invested in building out America's first advanced biofuel and include stakeholders from every link in the value chain from feedstock growers to biodiesel producers, distributors, retailers, and consumers, as well as infrastructure and products and services suppliers. Biodiesel can be produced from a range of feedstocks, including oil from numerous oilseed crops, such as soybeans, canola, and sunflowers. Members of SABR Coalition have participated in the LCFS program, including obtaining pathways for biodiesel. SABR Coalition also supports the comments submitted by the American Soybean Association.

SABR Coalition submitted comments on the First 15-Day Changes, which first proposed a 20% limit on credits for biomass-based diesel (e.g., biodiesel) produced from virgin soybean oil and canola oil.¹ Under the proposal, any biomass-based diesel from virgin soybean and canola oil in excess of 20% will be assessed the carbon intensity of the applicable diesel pool benchmark for the year or the certified carbon intensity of the applicable fuel pathway, whichever is higher. Rather than address the numerous concerns raised by public comments as to the lack of support and detrimental impacts of such a proposal, the Second 15-Day Changes would expand these provisions to biomass-based diesel from virgin soybean, canola, and sunflower oil. The only explanation provided is that it is consistent with the rulemaking's objective to provide guardrails on crop-based biofuels to prevent potential adverse impacts and that adding sunflower oil responds to feedback that limiting this provision to soy and canola could lead to incentives to increase use of other oilseeds for biofuel production. But, the "price premium may make it prohibitive to use sunflower oil in biodiesel."² This illustrates, as SABR Coalition argued in its comments, the lack of empirical evidence that the proposed limitation is necessary or warranted.

¹ SABR Coalition also supported the comments of the American Soybean Association and NATSO/SIGMA.

² National Sunflower Association, *Biodiesel*, <https://www.sunflowerusa.com/oil/biodiesel/> (last visited Oct. 13, 2024).

I. Limitations on Crop-Based Feedstocks for Biodiesel are Unwarranted.

The Initial Statement of Reasons (p. 32) simply states that guardrails are needed to “reduce the risk that rapid expansion of biofuel production and biofuel feedstock demand could result in deforestation or adverse land use change.” CARB does not explain how these guardrails would operate, and land use changes are already considered in setting the carbon intensity scores, which disadvantages crop-based biodiesel under the LCFS. Citing to no real world data to explain this claimed “risk,” additional guardrails are simply not warranted.

A. There is no support to impose limitations on credits for crop-based biodiesel, much less to expand those limitations to other feedstocks.

The Second 15-Day Changes continue to illustrate that CARB’s proposal is not grounded in reality. As noted above, the proposed addition of sunflower oil to the feedstocks limited in the proposal does not appear to consider actual market conditions that essentially prices sunflower oil out of the biomass-based diesel market. Indeed, despite the substantial growth in biodiesel and renewable diesel production, sunflower oil has not been included (or, to our knowledge) sought to be added as an eligible feedstock under the U.S. Renewable Fuel Standard, even though there are benefits to ensuring a diversity of feedstocks to support production.

It is unclear what support CARB is relying on to add sunflower oil, although several comments argued for a broader and more stringent limitation on biomass-based diesel volumes. These comments fail to understand the difference between biofuel feedstocks (including waste oils) and the vegetable oil market and cherry pick and misstate data to argue the LCFS will impact global demand. For example, soybeans are approximately 20% oil and 80% protein meal, and meal represents a significant source of demand for soybeans, which is largely ignored. U.S. farmers have also been able to meet increasing demand since the increase in biofuel production with the U.S. Renewable Fuel Standard. While there was a recent increase in soybean prices that some have attributed to the increased demand from renewable diesel facilities, this ignores other factors contributing to these prices that were unrelated to biofuel production and that prices have been trending down since that spike in prices.³ Nevertheless, there has been significant investments for increased U.S. capacity in crushing to meet anticipated demand, and there were record high crushes in 2024.⁴ Soybean yields and production are also forecast at record highs.⁵ And, export demand for U.S. soybeans has been below previously anticipated levels.⁶ Biodiesel has long been a market for surplus soybean oil, and there is no basis to impose such limits on biodiesel, which is discussed further below.

More important, CARB already rejected a similar recommendation from the Environmental Justice Advisory Committee (EJAC), finding that modeling of a scenario implementing their

³ Soybean Prices – 45 Year Historical Chart, Macrotrends, https://www.macrotrends.net/2531/soybean-prices-historical-chart-data#google_vignette (data as of Oct. 16, 2024).

⁴ USDA, *Oil Crops Outlook: September 2024*, at 2 (Sept. 16, 2024), <https://www.ers.usda.gov/webdocs/outlooks/110006/ocs-24i.pdf?v=3360.1>.

⁵ *Id.* at 1; see also USDA Report Projects Record 2024 Corn and Soybean Yields, Morning AgClips, Aug. 20, 2024, <https://www.morningagclips.com/usda-report-projects-record-2024-corn-and-soybean-yields/>.

⁶ Karen Braun, *Recent strength in US soy sales not enough to lift export prospects*, Reuters, Sept. 20, 2024, <https://www.reuters.com/markets/commodities/recent-strength-us-soy-sales-not-enough-lift-export-prospects-2024-09-20/>.

recommendations would result “in higher volumes of fossil diesel being used than any of the other scenarios evaluated.”⁷ Limiting the volumes would result in insufficient credits, increase costs, increase air emissions, decrease GHG emissions reductions, and decrease health benefits.⁸ CARB has properly rejected such calls and must continue to do so.

B. Imposing limitations on crop-based biodiesel would have detrimental environmental impacts rather than provide any guardrails against the concerns claimed by CARB.

While CARB rejected the arbitrary restrictions on biomass-based diesel volumes in the Second 15-Day Changes that other commenters suggested, it continues to propose a 20% limitation on certain crop-based biomass-based diesel fuels and would now expand it to include soybean oil, canola oil, and sunflower oil. Where biodiesel has long been an important outlet for supplies of excess vegetable oils, particularly soybean oil and canola oil, these limitations would have detrimental impacts on farmers. An important benefit of having this additional market is to improve the farmer’s economics, which allows farmers to invest in sustainable practices and to better protect their farms from other land use pressures, including expansion of urban areas with their attendant pollution issues.⁹ Based on the most recent Census of Agriculture, “[t]he amount of farmland and number of farms in the U.S. continue to decline.”¹⁰ In the meantime, use of conservation practices are increasing.¹¹ As SABR Coalition’s prior comments explained, U.S. soybean farmers continue to adopt precision agricultural technologies and practices that increase productivity and yield, enhance resilience to environmental changes, and reduce GHG emissions.¹² These sustainable practices provide GHG emission reductions benefits that will be lost if crop-based fuels are unduly limited. Restricting this markets through regulation sends the

⁷ Initial Statement of Reasons at 116; *see also* CARB, *California Low Carbon Fuel Standard Workshop*, Presentation at Slide 23, Apr. 10, 2024, <https://ww2.arb.ca.gov/sites/default/files/2024-04/LCFS%20April%20Workshop%20Slides.pdf>. The EJAC appears to have based this on one study from Europe that uses a different model than used in the U.S. EJAC Presentation, April 10, 2024 Low Carbon Fuel Standard Public Workshop. EPA recently reviewed different models and held a workshop on assessing the greenhouse gas (GHG) emissions based on land use changes, which showed a wide range of results due largely to the significant uncertainty surrounding these analysis. Even comments that support limits on crop-based biofuels recognize that “[m]ore than 14 years of research has not led to a consensus estimate of these emissions.” Comments of Union of Concerned Scientists, Aug. 27, 2024, at 2. Uncertainty, however, is not a basis to impose limitations when “[r]esearch based on misclassifications of land use and flawed assumptions and methodologies spurred skepticism about the environmental and GHG emission reduction benefits of biofuels ... has since been disproven.” Todd Neeley, *Scientists: RFS Land Use Claims False*, *Progressive Farmer*, July 8, 2024, <https://www.dtnpf.com/agriculture/web/ag/news/business-inputs/article/2024/07/08/scientists-push-court-reject-land>. CARB is to rely on the best available science.

⁸ Initial Statement of Reasons at 116-124.

⁹ *See, e.g.*, GAP Initiative, Virginia Tech College of Agriculture and Life Sciences, *America’s Disappearing Farm and Range Land*, <https://globalagriculturalproductivity.org/case-study-post/americas-disappearing-farm-and-range-land/> (last visited Oct. 16, 2024).

¹⁰ Farmland Information Center, Fact Sheet, *2022 Census of Agriculture*, at 2, Aug. 6, 2024, <https://farmlandinfo.org/wp-content/uploads/sites/2/2024/02/census-of-ag-fact-sheet-2022.pdf>.

¹¹ *Id.* at 3

¹² Kate Vaiknoras, *U.S. Soybean Production Expands Since 2002 as Farmers Adopt New Practices, Technologies*, USDA Economic Research Service, July 26, 2023, <https://www.ers.usda.gov/amber-waves/2023/july/u-s-soybean-production-expands-since-2002-as-farmers-adopt-new-practices-technologies/>; USDA, *Climate-Smart Agriculture and Forestry*, <https://www.farmers.gov/conservation/climate-smart> (last visited October 13, 2024).

wrong policy signals, creating a disincentive to farmers to continue to innovate and further invest in sustainable practices. This appears to have been ignored by CARB.

Moreover, there is simply no reason to believe that the proposed cap would serve as a guardrail at all, even with the inexplicable addition of sunflower oil. Soybean and canola oils are major feedstocks for biodiesel production, according to data from the U.S. Energy Information Administration (EIA)¹³ and the U.S. Environmental Protection Agency (EPA).¹⁴ Yet, California's feedstock breakout does not reflect this same percentage. This shows that there are already greater incentives to use waste oils for production of biomass-based diesel under the LCFS, which CARB recognized in its April 10, 2024 Workshop (Staff Presentation at slide 53, 57-59).¹⁵ This is largely because of the lower carbon intensity scores attributed to those feedstocks. This has resulted in increased imports of waste feedstocks, which can largely be attributed to the increase in renewable diesel capacity. Renewable diesel production capacity has significantly outpaced biodiesel production capacity, which has been on the decline and "now accounts for the smallest share of U.S. biofuels capacity."¹⁶ The increased stringency in the requirements would continue to incentivize waste feedstocks over crop-based feedstocks for these new renewable diesel facilities. Limiting crop-based feedstocks would only further incentivize increased imports of feedstock, which are much more difficult to verify.

Further, it simply makes no sense that a renewable fuel, such as soybean biodiesel, with all of its environmental benefits would create "deficits" because CARB will treat it essentially as fossil based diesel. This ignores the "guardrails" already in place with respect to U.S. biodiesel production. In particular, the U.S. Renewable Fuel Standard includes protections against land conversion by requiring crop-based feedstocks to come from land that was agricultural land in December of 2007. EPA has found that total agricultural land in the United States (and Canada) has remained below that in 2007. We are concerned that the "guardrails" proposed, including land certification requirements, are inconsistent with the U.S. Renewable Fuel Standard. This could create problems in enforcement and could create an obstacle to the accomplishment and execution of the federal program by restricting feedstocks that otherwise would be eligible under the U.S. Renewable Fuel Standard and thereby impact the volume of fuels that may be available to meet the federal volume requirements. This raises potential preemption concerns.

The proposed cap on crop-based biodiesel also would not be consistent with AB32 on several grounds, including requiring consideration of other environmental impacts, seeking maximum technologically feasible and cost-effective GHG emissions reductions, and using the best available science. In establishing the LCFS, CARB recognized that it would reduce GHG emissions, but also would cut "other smog-forming and toxic air pollutants," citing to reducing petroleum dependency and achieving air quality benefits as the intent of the design of the

¹³ EIA, *Monthly Biofuels Capacity and Feedstocks Update*, Tables 2b and 2c, <https://www.eia.gov/biofuels/update/> (with data for July 2024).

¹⁴ EPA, *RINS Generated Transactions – Feedstock Summary Report*, <https://www.epa.gov/fuels-registration-reporting-and-compliance-help/rins-generated-transactions> (data as of Sept. 10, 2024).

¹⁵ Available at <https://ww2.arb.ca.gov/sites/default/files/2024-04/LCFS%20April%20Workshop%20Slides.pdf>.

¹⁶ See EIA, *In 2023, U.S. renewable diesel production capacity surpassed biodiesel production capacity*, Today in Energy, Sept. 5, 2023, <https://www.eia.gov/todayinenergy/detail.php?id=60281>; see also CARB, April 10, 2024 Low Carbon Fuel Standard Public Workshop, Staff Presentation, Slide 28, <https://ww2.arb.ca.gov/sites/default/files/2024-04/LCFS%20April%20Workshop%20Slides.pdf>.

program.¹⁷ While both biodiesel and renewable diesel provide tailpipe emissions reductions compared to petroleum diesel, biodiesel does have increased GHG emission reductions compared to both petroleum diesel and renewable diesel, and also provides local environmental benefits, where EPA has found environmental justice concerns with both petroleum and renewable diesel facilities.¹⁸ Biodiesel also provides more cost-effective reductions as the more efficiently produced and lower-cost fuel. Further, treating crop-based biodiesel as having the same carbon intensity as the baseline diesel fuel, rather than utilizing the carbon intensity score that was found for the specific biodiesel facility, simply has no basis in science. It further treats biodiesel inequitably, which was to be another hallmark of the LCFS.

Indeed, the proposed limitation on crop-based feedstocks would likely have a bigger impact on biodiesel facilities that are more likely to use one type of feedstock for all or the bulk of their production. Renewable diesel facilities, which are often converted from petroleum refineries, on average have a much larger production capacity than biodiesel facilities and, as newer facilities, are more likely to be designed to utilize multiple feedstocks. Different feedstocks have different levels of free fatty acids that can have an impact on the transesterification process, requiring different levels of pretreatment. Waste oils may also have additional impurities. Smaller biodiesel facilities may have been designed to utilize vegetable oils versus waste oils would effectively be excluded from the LCFS program. These facilities would not be able to compete with the larger renewable diesel facilities for these waste oils to justify adding pretreatment to their operations. Rather than protect against new land clearings, this would only limit existing plants that have long been in operation from participating in the LCFS program. While the Second 15-Day Changes would defer the 20% limitation for those that submitted a pathway certification application before the effective date of the regulation until January 1, 2028, this does not address the concerns that have been raised or the inconsistencies with the statute.

Thus, SABR Coalition believes the proposed changes would eliminate competition, exclude maximum technologically feasible and cost-effective GHG emissions reductions with respect to diesel fuels, and unfairly advantage larger, more pollutive renewable diesel and sustainable aviation fuel production facilities.¹⁹ This does not further the goals of the LCFS or follow the instructions of the California legislature. Where California has an outsized influence on the national market, as most renewable diesel produced in the U.S. is targeted for California, SABR Coalition requests that CARB be mindful of how biofuel regulatory measures taken by California, combined with federal regulatory measures, can create market distortions on the entire U.S. market. For example, sustainable aviation fuel produced from imported used cooking oil that comes online in California means that a gallon of soy biodiesel goes offline somewhere

¹⁷ CARB, *Low Carbon Fuel Standard – About*, <https://ww2.arb.ca.gov/our-work/programs/low-carbon-fuel-standard/about> (last visited Oct. 13, 2024).

¹⁸ Renewable Fuel Standard (RFS) Program: Standards for 2023–2025 and Other Changes 87 Fed. Reg. 80,582, 80,617 (proposed Dec. 30, 2022).

¹⁹ See, e.g., Carlo Hamelinck et al., *Conversion Efficiencies of Fuel Pathways for Used Cooking Oil*, Final Report at 7 (2021), https://www.studiogearup.com/wp-content/uploads/2021/03/2021_sGU_EWABA-and-MVaK_Options-for-the-deployment-of-UCO.pdf (study comparing biodiesel, renewable diesel, co-processed renewable diesel, and sustainable aviation fuel found “that of all four pathways, [used cooking oil methyl ester] has the lowest production costs, the highest feedstock efficiency, the highest emission reduction performance and, consequently, the lowest carbon abatement costs”).

else in the country. This effectively results in an increase in GHG emissions since biodiesel is the lowest cost, lowest carbon biomass-based diesel.

II. CARB Should Conduct More Analysis Before Imposing Arbitrary Limits on Biodiesel Feedstocks, Including Reconsidering its ILUC Modeling and Determinations Based on Disputed ILUC Assumptions and Recognizing the Sustainable Agricultural Practices of US Farmers.

At a minimum, based on the limited information provided to support the proposed limitation, it is clear that more analysis is required to be conducted by CARB and presented to the public for comment before a proposal limiting biodiesel feedstocks can be finalized. We found no analysis of the impacts of the proposed cap or the expansion to include sunflower oil, which has different market considerations than soybean oil and canola oil. As noted above, we believe the proposed cap would impact biodiesel producers more than renewable diesel producers, yet CARB conducted no environmental review of these potential implications.²⁰

Instead, CARB appears to be relying on unsupported or highly disputed claims of land use changes as a result of increased crop-based biomass-based diesel under the LCFS. As SABR Coalition explained in its comments on the First 15-Day Changes, modeled forecasts of emissions attributed to claimed indirect land use change (ILUC) have not been found to be accurate. “[A]nalyzes based on more complete, updated data, found that the average carbon intensity of biofuels is significantly less than conventional gasoline,” with this benefit “growing at an accelerated pace” as technologies and practices evolve.²¹ As the data and science has improved, CARB must continue to update its modeling, including adopting the most current version of the GTAP model, which shows significant decreases in emissions associated with land use impacts for soybeans.²²

In addition, the U.S. Department of Agriculture (USDA) has recognized numerous climate-smart agriculture and forestry mitigation activities that can help reduce GHG emissions from the agricultural sector.²³ This includes land management and restoration of disturbed lands. A scenario reviewed by CARB recognized the potential for including these practices as part of the credit generation process, but CARB did not include it in its analysis, stating there is not yet a mechanism for quantifying or verifying these practices.²⁴ Some practices, however, are already being considered as part of the Inflation Reduction Act tax credits that look at carbon intensity of fuels, such as sustainable aviation fuel. CARB should incorporate these before imposing additional (and unsupported) ILUC penalties on crop-based feedstocks for biodiesel. SABR

²⁰ In addition to providing greater GHG emissions reductions than renewable diesel, biodiesel production also uses less water and has less waste than renewable diesel production. Renewable diesel production facilities also have a larger footprint.

²¹ Todd Neeley, *Scientists: RFS Land Use Claims False*, Progressive Farmer, July 8, 2024, <https://www.dtnpf.com/agriculture/web/ag/news/business-inputs/article/2024/07/08/scientists-push-court-reject-land>.

²² See Comments of American Soybean Association, Aug. 26, 2024, at 6; Comments of SABR Coalition, Aug. 27, 2024, at 5.

²³ See, e.g., USDA Natural Resources Conservation Service, *Climate-Smart Agriculture and Forestry (CSAF) Mitigation Activities List for FY2025* (2023), <https://www.nrcs.usda.gov/sites/default/files/2023-10/NRCS-CSAF-Mitigation-Activities-List.pdf>.

²⁴ Initial Statement of Reasons at 125.

Coalition also urges CARB to work with USDA on those efforts and incorporate them in updated modeling.

Finally, as also explained in SABR Coalition's prior comments, "there has been more emphasis on sustainability and indirect effects of bioenergy than on baseline (often fossil fuel) scenarios. ... There needs to be equitable treatment of direct and indirect effects for any energy options being analyzed including baseline fuel(s) that would be replaced by proposed bioenergy sources."²⁵ Land use change impacts of conventional and unconventional oil production continues to be largely ignored, despite the increase in sourcing oil from unconventional sources and new wells being needed when old wells become depleted. This is compared to agricultural land in the United States continuing to trend downward with increased yields attributed to land intensification and improved agricultural practices versus clearing new lands. Unlike the lack of evidence of land use changes that can be attributed to biofuel production, there is real world and visual evidence of impacts of oil production on habitats, including sensitive ecosystems.

III. Double Counting of Indirect Emissions at the Federal and State Levels Already Restricts use of Crop-Based Feedstocks in California.

As noted above, the incentives in California already lean toward waste feedstocks for biomass-based diesel fuels, not crop-based fuels. SABR Coalition's prior comments explained the double penalties that are imposed on crop-based feedstocks, particularly soybean oil. We restate those comments here with a revision to correct a typographical error.

The re-evaluation of indirect emissions modeling for crop-based biofuels becomes especially important when the Clean Transportation Production Credit (Section 45z) goes into effect in 2025. To the extent Section 45z embraces a California-style carbon intensity scoring system in its incentive structure, it will likely apply ILUC penalties to crop-based fuels. Currently approximately half of the nation's biodiesel and renewable diesel fuels (and nearly all the nation's sustainable aviation fuel) are sold in California or one of the other states that have embraced a California-style LCFS state program.

Under the current expected approach, a gallon of biodiesel from soybean oil will have an ILUC penalty of 10 g/MJ of CO₂ for assumed land conversion (for which there is no conclusive scientific evidence) assigned at the federal level. If that same gallon is consumed in California, the same 10 g/MJ ILUC penalty is applied again to the same gallon under the LCFS, as if the gallon was burned twice and the same land was converted twice. The combination of the federal 45z and California LCFS will have assigned 20 g/MJ of CO₂.²⁶ And this is the best-case scenario assuming that CARB updates its version of the GTAP-BIO model, which it has not indicated a willingness to do. If it does not, CARB will assign an ILUC penalty of 29.1 g/MJ of CO₂, making a total combined ILUC penalty of 39.1 g/MJ on the gallon of soy biodiesel that is applied against the combined value stack of credits. This is nearly four times the amount of ILUC penalty that the GREET model has forecasted that a gallon of soy biodiesel should be assigned.

²⁵ ISO PC 248 Working Group 4 Report on Indirect Effects at 2 (2012).

²⁶ A gallon of biodiesel contains approximately 125 MJ of energy.

<https://indico.ictp.it/event/8008/session/3/contribution/23/material/slides/2.pdf>.

When in reality there is no solidly consistent scientific evidence that the gallon of soy biodiesel will ever cause any land conversion.

This double (or rather, quadruple) counting is already happening today with SAF under the federal SAF credit (40B) combined with the California LCFS. Such a flawed policy is already leading to an alarming spike in questionable used cooking oil imports from China into California. These imports are displacing soybean oil, our nation's most abundant and sustainable agricultural feedstock. This outcome results in bad carbon policy, as well as bad agricultural, energy, trade, and economic policy. All of these factors make it critical that flawed indirect emissions modeling be re-evaluated using current science and actual scientific evidence. This reconsideration should rely on the hindsight of 20 years of data-gathering and actual science rather than relying on future forecasts, failed theories, flawed assumptions, and outdated data. There has been twenty years to prove the theory that land use change would be caused by US crop-based fuels, but there is more evidence to the contrary.

CONCLUSION

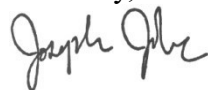
SABR Coalition again expresses its opposition to CARB's proposal to cap crop-based feedstocks for biodiesel production in the LCFS program. Any claimed risk of increased use of crop-based feedstocks for biodiesel has not been established for soybean or canola oils, much less to expand it to sunflower oil (or any additional feedstocks). Indeed, real world data and *science* indicates that claimed risk of deforestation and adverse land use change cannot be attributed to biodiesel production as a result of the LCFS. In fact, there is reason to believe such a limitation would increase GHG emissions and other environmental harms as a result of lost biodiesel volumes.

While we believe the carbon intensity scores already address potential land use changes, we continue to believe, even there, they are significantly overstated. Thus, SABR Coalition again urges CARB to reconsider its approach to ILUC modeling methods. At a minimum, CARB must use the most recent version of GTAP-BIO it uses to measure indirect emissions of crop-based biofuels. It should use the most current data available before it attempts to impose restrictions on biodiesel that can be used to meet the LCFS targets. Biodiesel is a cost-effective, low-carbon fuel that can be used today to reduce GHG emissions.

As noted above, SABR Coalition supports the comments of the American Soybean Association, particularly with respect to the sustainability and certification requirements in the proposal.

We appreciate the opportunity to comment on these important policy matters. We thank you for your work and look forward to working with you going forward to help the LCFS realize its important carbon reduction goals. Please contact me if you have any questions.

Sincerely,



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