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August 3, 2020

CC:PA:LPD:PR (REG-112339-19), Room 5203
Internal Revenue Service
P.O. Box 7604
Ben Franklin Station
Washington, DC 20044

Submitted via Regulations.gov

Re: Comments on REG-112339-19 Regarding Section 45Q Credit for Carbon Oxide Sequestration

Ladies and Gentlemen:

Thank you for the opportunity to comment on Proposed Treasury Regulation REG-112339-13 (the proposed regulations), guidance on Section 45Q Credit for Carbon Oxide Sequestration. In addition to these written comments, we request the opportunity to provide oral comments at the public hearing scheduled for August 26, 2020 and will provide a written outline of those comments by August 14, 2020.

Occidental Petroleum and its affiliates (together, Oxy) are industry leaders in the application of carbon dioxide to enhanced oil recovery (EOR), and these techniques result in the permanent sequestration of large quantities of carbon dioxide.[1] Oxy applies these technologies every day. Oxy has a reputation for excellence in designing and operating carbon dioxide capture and EOR projects within the industry and with the regulatory authorities that oversee these projects. Oxy operates 34 EOR projects using carbon dioxide injection to produce incremental oil from mature fields in the Permian Basin oil fields of West Texas and New Mexico—more than any other company. In recent years, Oxy has pursued a strategy of increasing its use of carbon dioxide from industrial sources in its EOR projects.

Oxy is generally supportive of the provisions in the proposed regulations and supports their adoption as final regulations subject to the following comments, which are described in greater detail in the body of this letter:

> *Contractual assurances (Prop. Treas. Reg. § 1.45Q-1(h)(2))*: Oxy generally supports the approach in the proposed regulations, which prescribes both required and permissible contract provisions when parties enter into contracts for the disposal,

[1] In these comments, Oxy uses the term carbon dioxide to describe its operations and where otherwise appropriate and uses the term carbon oxide in all other instances.

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injection, or utilization of qualified carbon oxide. Oxy seeks clarification regarding the provisions in the proposed regulations regarding limitations on damages and liquidated damages and suggests that the proposed regulations be revised to clarify that a binding contract can limit damages, so long as damages may equal at least five percent of the total contract value. Oxy also seeks clarification that any limitation on damages would apply only to contractual provisions governing the disposal, injection, or utilization of carbon oxide or recapture of the same and would not apply to other general contractual provisions. Finally, Oxy seeks clarification that taxpayers may employ a chain of contracts with subcontractors or intermediaries to meet the contractual assurance requirement.

Recapture (Prop. Treas. Reg. § 1.45Q-5): Oxy generally agrees with the proposed regulations on recapture, including the netting concept, LIFO approach to computing the Section 45Q credit subject to potential recapture, *pro rata* allocations of leaked carbon oxide among multiple sources and taxpayers, and imposing recapture liability in the taxable year of the recapture event. However, Oxy believes that a lookback period of three years is sufficient because, in Oxy's experience, carbon dioxide injected into an underground reservoir becomes stable and is no longer likely to migrate to the atmosphere after three years. In addition, there are certain technical issues that should be addressed in the final regulations—particularly with respect to the interaction of the recapture rules with the rules applicable to general business credit computations, limitations, and carryovers under Sections 38 and 39.

Treating carbon dioxide molecules as fungible (Prop. Treas. Reg. § 1.45Q-2(a)): Oxy requests that the IRS more explicitly state in the final regulations that carbon dioxide is fungible. In particular, carbon dioxide captured and measured at a qualified facility and transported via a shared pipeline or stored at a facility with other carbon dioxide should be treated as the same carbon dioxide when it is removed from the pipeline or storage facility at another location, verified in amount, and disposed of, injected, or utilized.

Secure geological storage (Prop. Treas. Reg. § 1.45Q-3): Oxy supports the use of Subpart RR of the EPA's greenhouse gas reporting program (GHGRP) as a standard for establishing secure geological storage and reporting the amount of qualified carbon oxide sequestered through the year. When taxpayers report secure geological storage based on the standards developed by the International Organization for Standardization (ISO), the EPA does not conduct oversight over the ISO computations and the ISO computations are not published on the EPA's GHGRP web site. Given these differences in EPA oversight and public disclosure, Oxy supports the proposed regulations' requirement that taxpayers reporting secure geological storage under ISO submit annual certifications of the taxpayer's ISO documentation by a qualified independent engineer or geologist.

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The industrial facility exclusion and manufacturing process (Prop. Treas. Reg. §§ 1.45Q-2(d)(1) and (3)): Oxy supports the approach taken in the proposed regulations' definition of industrial facility, including the exclusion for wells producing carbon dioxide from natural carbon dioxide-bearing formations and the recognition that carbon dioxide captured at a gas plant that produces natural gas for sale or commercial use is the product of a manufacturing process. Oxy suggests adding examples to illustrate the application of the proposed regulations to manufacturing processes that produce products for sale at a profit and produce products for other commercial purposes.

Scope of "carbon capture equipment" definition for purposes of applying the 80/20 Rule (Prop. Treas. Reg. §§ 1.45Q-1(g)(3), 1.45Q-2(c), and 1.45Q-2(g)(5)): Oxy generally agrees with the functional definition of "carbon capture equipment" in the proposed regulations, but requests clarification of the "all components" language in Section 45Q-2(c). Specifically, Oxy requests clarification for purposes of applying the 80/20 rule, including treating all components that make up an independently functioning process train as the relevant unit for purposes of applying the 80/20 rule.

Definition of "qualified facility" and aggregation (Prop. Treas. Reg. § 1.45Q-2(g)): Oxy believes that the final regulations should confirm explicitly that all carbon oxide captured at an industrial facility or direct air capture facility will be considered together for purposes of meeting the Section 45Q(d)(2) threshold levels to be a qualified facility, even if the carbon oxide will be subject to different levels of credits. Oxy also believes that the final regulations should provide certainty to taxpayers that carbon oxide captured using different carbon capture equipment at multiple sites in an industrial facility or direct air capture facility is aggregated for purposes of meeting the thresholds under Section 45Q(d)(2). Oxy suggests that the final regulations include a facts and circumstances test, using factors similar to those in IRS Notice 2020-12, to determine whether the operations or economics of the activities generating the carbon oxide are integrated for purposes of aggregation. Lastly, Oxy believes that electricity generating components that are dedicated to providing power for an industrial facility or direct air capture facility should be treated as part of that facility.

Lifecycle Analysis (LCA) (Prop. Treas. Reg. § 1.45Q-4): Oxy believes that the final regulations should clarify the boundaries of the lifecycle analysis and how to take into account non-carbon-oxide greenhouse gases in the lifecycle analysis of the utilization process. Specifically, the final regulations should set the boundary for the lifecycle analysis at the beginning of the utilization process and after the capture of the qualified carbon oxide. If the utilization of the qualified carbon oxide results in emissions of other greenhouse gases, they should be taken into account in the lifecycle analysis in carbon oxide equivalence, but the capture of greenhouse gases other than carbon oxide should not fall within the lifecycle analysis.

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I. Contractual Assurances (Prop. Treas. Reg. §1.45Q-1(h)(2))

Section 1.45Q-1(h)(2) of the proposed regulations provides guidance on how a taxpayer may contractually ensure in a binding written contract that another party will carry out the disposal, injection, or utilization of qualified carbon oxide in the manner required by Section 45Q and the proposed regulations. Oxy is generally supportive of the approach adopted in proposed Section 1.45Q-1(h)(2)(iii), which prescribes both required and permissible contract provisions for such contracts. The proposed language strikes a reasonable balance—on the one hand ensuring that contracts will be effective at ensuring disposal, injection, and utilization, and on the other hand recognizing that a valid contract governing a large-scale carbon oxide capture and storage project will typically include commercially reasonable terms governing long term liability, indemnities, liquidated damages, and quantities to be supplied and disposed of.

However, proposed Section 1.45Q-1(h)(2)(i), which states that a written contract is binding only if it "does not limit damages to a specified amount," is inconsistent with the rest of this proposed section. First, this language appears to be inconsistent with the language in proposed Section 1.45Q-1(h)(2)(iii)(B), stating that a binding written contract "may include long-term liability provisions, indemnity provisions, penalties for breach of contract, or liquidated damages provisions." Second, in large-scale industrial projects such as carbon oxide capture and sequestration, parties operating at arm's length typically use such provisions to allocate risk. It would be unrealistic to entirely prohibit commercial parties from allocating risk among themselves in this way, so long as the contracts require the parties to properly dispose of the qualified carbon oxide in the manner required by Section 45Q and the proposed regulations. Further, any damages limitation should apply solely to contractual provisions governing the disposal, injection, or utilization or recapture, and not limit damages for general contractual provisions.

In other contexts, the IRS has recognized that a contract can be "binding" even where damages are limited in some fashion. For example, Section 8.02(1) of Notice 2020-12 uses a similar binding written contract requirement to that in the proposed regulation, but includes a second sentence clarifying that "a contractual provision that limits damages to an amount equal to at least five percent of the total contract price will not be treated as limiting damages to a specified amount." Notice 2020-12, Section 8.02(1); *see also* Treas. Reg. § 1.168(k)-1(b)(4)(ii) (similar five percent of contract value language in definition of "binding contract"). To clarify that liquidated damages provisions are permissible so long as they are equal to at least five percent of the total contract value, Oxy suggests that the IRS revise the language in Section 1.45Q-1(h)(2)(i) with similar language to that of Section 8.02(1) of Notice 2020-12 as follows:

> (1) Binding written contract. A written contract is binding only if it is enforceable under State law against both the taxpayer and the party that physically carries out the disposal, injection, or utilization of the qualified carbon oxide—including any subcontractor responsible for all or any portion of such disposal, injection, or utilization—and does not

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limit damages to a specified amount. For this purpose, a contractual provision that limits damages to an amount equal to at least five percent of the total contract value will not be treated as limiting damages to a specified amount.

Oxy believes this suggested language achieves the balance between ensuring adequate disposal, injection, and utilization of qualified carbon oxide, while allowing sophisticated parties to enter into contracts with commercially reasonable terms. Oxy emphasizes that the inclusion of the "five percent" language is most important to achieve the flexibility necessary for parties to invest in large-scale carbon capture projects.

Oxy also suggests that the final regulations permit taxpayers to employ a chain of contracts, each of which meets the assurance requirement. Such a chain of contracts may be necessary, for example, where a taxpayer contracts with one or more subcontractors to complete the functions necessary to ensure disposal, injection, or utilization of qualified carbon oxide as required under Section 45Q and the regulations. Similarly, a taxpayer that owns carbon capture equipment may contract with intermediaries in the stream between capture and disposal, injection, or utilization, such as a person who transports qualified carbon oxide, who in turn contracts with a third person who physically carries out disposal, injection, or utilization. The final regulations should address this issue by clarifying that a direct contract is not required between the taxpayer to which the credit is attributable and the person who physically disposes of, injects, or utilizes the qualified carbon oxide, so long as there is a chain of binding written contracts, each of which obligates the party taking possession of the qualified carbon oxide to either physically or contractually ensure the disposal, injection, or utilization of the qualified carbon oxide in the manner prescribed under Section 45Q and the regulations.

II. Recapture (Prop. Treas. Reg. § 1.45Q-5)

Section 1.45Q-5 of the proposed regulations provides guidance on recapture of Section 45Q credits in the event that qualified carbon oxide for which a credit has been claimed ceases to be captured, disposed, or used as a tertiary injectant. The proposed regulations specify that a recapture event occurs when the amount of leaked qualified carbon oxide for which a credit has been claimed exceeds the amount disposed of in secure geological storage or used as a tertiary injectant in the same taxable year (*i.e.*, netting concept). The proposed regulations address identifying and quantifying leakage events, computing the recapture of credits based on a last-in-first-out (LIFO) methodology, allocating the recapture liability among multiple taxpayers, and reporting recapture liability by the affected taxpayers. The proposed regulations include a *force majeure* exception to recapture for leaks of qualified carbon oxide resulting from actions not related to the selection, operation, or maintenance of the storage facility, such as volcanic activity or a terrorist attack.

Oxy generally agrees with the proposed regulations on recapture, including the netting concept, LIFO approach to computing the Section 45Q credit amount to be used in the recapture

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analysis, pro rata allocations of leaked carbon oxide among multiple sources and taxpayers, imposing recapture liability in the taxable year of the recapture event, and the *force majeure* exception. However, there are certain technical aspects that should be revised in the final regulations—particularly with respect to the lookback period and the interaction of the recapture rules with the rules applicable to general business credit computations, limitations, and carryovers under Sections 38 and 39. The notice of proposed regulations anticipates some of these issues when it requests comments "on how to apply the recapture provisions to section 45Q credits that are carried forward to future taxable years due to insufficient income tax liability in the current taxable year." However, the revisions should go further to ensure that any recapture liability imposed is based on the tax benefits previously realized from claiming Section 45Q credits for the qualified carbon oxide that is later implicated in a recapture event.

A. Recapture Year and Lookback Period

Oxy supports imposing recapture liability in the taxable year of the recapture event as specified by Section 1.45Q-5(g). This avoids the need to file amended returns for the years in which credits were originally claimed and associated statute of limitations issues. It also tends to incentivize the current operator of a disposal site or EOR operation to avoid leaks in the first place.

Oxy believes that a three-year lookback period, rather than the five-year period in Section 45Q-5(f) of the proposed regulations, would constitute a conservative approach to accounting for potential leakage events. As the Treasury Department and the IRS recognize in the preamble to the proposed regulations, open-ended or undefined lookback periods introduce too much uncertainty, which would increase financial risk associated with projects and dissuade investors. As explained below, a lookback period of five years is scientifically unnecessary and will unduly discourage investment in carbon capture projects. In the proposed regulations, the Treasury Department and the IRS specifically solicited "data, models, or other evidence that could enhance the rigor with which the final regulations are developed." In Oxy's experience in its fields subject to MRV plans, including the Denver Unit and Hobbs fields, the leakage rate is less than one percent of the amounts disposed of or used as a tertiary injectant during the reported periods. Oxy believes this data supports a shorter lookback period and suggests that the final regulations shorten the lookback period to three years.

As noted above, Oxy has decades of experience injecting carbon dioxide into underground reservoirs as part of EOR projects in the Permian Basin oil fields of West Texas and New Mexico. Reservoir modeling is a critical factor in Oxy's decision making on investments in EOR projects. Oxy builds sophisticated models of the expected behavior of injected carbon dioxide and other fluids into each underground reservoir subject to EOR. During the life of its EOR projects, Oxy constantly monitors the actual performance of the injection and production wells across the fields. It also conducts core sampling to verify formation characteristics and model the reservoirs. Over the life of these projects, therefore, Oxy has

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developed a thorough understanding of how carbon dioxide behaves in underground reservoirs and verified its understanding through scientific observation.

Based on Oxy's experience, it takes less than three years for carbon dioxide injected into an underground reservoir to become stable. Once it has stabilized, the carbon dioxide is unlikely to escape to the atmosphere. Because injected carbon dioxide stabilizes in less than three years, Oxy recommends a three-year lookback period as sufficient for purposes of recapture. Oxy believes that the five-year lookback period in Section 1.45Q-5(f) and (g) of the proposed regulations is scientifically unnecessary. Financial investors will look to these regulations in making investment decisions. A lookback period of five years may increase uncertainty for financial investors and, as a result, reduce investment in carbon capture and sequestration projects.

B. Netting Approach to Identifying Recapture Events

Oxy supports the provisions in Section 1.45Q-5(b), (d), and (g) of the proposed regulations specifying that a recapture event occurs only when the leaked amount of qualified carbon oxide exceeds the amount of qualified carbon oxide disposed of in secure geological storage or used as a tertiary injectant in that same taxable year. In Oxy's experience, a well-managed disposal site or EOR field has very little leakage during a reporting period, particularly as compared to the amounts injected during the period. The reason is because underground reservoirs have often held oil and gas for millions of years and EOR operators are motivated to avoid waste of carbon dioxide, which is valuable and often represents the largest cost of an EOR project. Applying the netting concept of the proposed regulations effectively imposes the recapture liability on taxpayer, by reducing their current year Section 45Q credits (at current year rates), while simplifying the reporting of recapture.

C. LIFO Approach to Allocating Leaked Carbon Oxide

Oxy supports the LIFO approach to computing the Section 45Q credit amount for purposes of the recapture analysis. Because the Section 45Q credit rate changes each taxable year, it is necessary to attribute leaked qualified carbon oxide to a credit year so that the amount of credit potentially subject to recapture can be computed. The LIFO approach is consistent with two aspects of carbon oxide injection and disposal. First, as discussed below, carbon oxide molecules are fungible. Second, carbon oxide injected into underground oil and gas formations tends to stabilize over time, so that generally the carbon oxide most susceptible to leakage is the carbon oxide that was most recently injected. Given these characteristics of injected carbon oxide and the need to attribute leaked qualified carbon oxide to a taxable year for purposes of computing the credit subject to recapture analysis, the LIFO approach makes sense.

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D. Recapture Computations and Sections 38 and 39

With respect to the interaction of Section 45Q recapture with the rules governing the general business credit under Sections 38 and 39, Oxy believes that the following changes are necessary to avoid recapture liability that exceeds the prior tax benefit from claiming the credit. First, Section 1.45Q-5(e) should be revised to state that (i) the Section 45Q credits *potentially* subject to recapture equals the product of the quantity of recaptured qualified carbon oxide (in metric tons) and the appropriate credit rate and (ii) the recapture amount is based on the actual tax benefit that the taxpayer received from claiming the Section 45Q credit for the qualified carbon oxide that leaked in the recapture event. Second, Section 1.45Q-5(g) of the proposed regulations should be revised so that this actual tax benefit from claiming Section 45Q credits for the leaked qualified carbon oxide is added to the taxpayer's tentative tax for the year of the recapture event. If the taxpayer has other available credits in that year, such credits should apply to offset the recapture amount. Third, to the extent that the taxpayer has yet to receive an actual tax benefit from the Section 45Q credits associated with the leaked qualified carbon oxide because their Section 45Q credits were included in a Section 38 credit carryover that remains unused, that Section 38 carryover should be reduced by the recapture amount. The reasons for these proposed changes are discussed in more detail below.

Section 45Q is part of the general business credit under Section 38. *See* Section 38(b)(29). A taxpayer's general business credit for a taxable year includes the business credit carryforward, the current year business credit, and the business credit carryback to the taxable year. Section 38(a). The business credit for the current year is the aggregate of numerous credits listed in Section 38(b) determined for that year. The aggregate business credit is subject to a limitation under Section 38(c) based on the taxpayer's liability for the year before application of the credit. Under Section 39, any remaining credits are first carried back one year and then forward twenty years. Section 38(d) prescribes an ordering rule for purposes of determining the extent to which component credits listed in Section 38(b) are used in a particular year. All of these rules come into play when determining the recapture amount under Section 45Q(f)(4), which directs the Secretary to prescribe regulations for recapturing "the *benefit* of any credit allowable under subsection [45Q(a)] with respect to qualified carbon oxide that ceases to be captured, disposed of, or used as a tertiary injectant." (emphasis added).

Although there is some complexity to computing the actual tax benefit from previously claimed Section 45Q credits that must be recaptured, there is precedent that provides a methodology for making such computations. With respect to the investment credit, Treas. Reg. § 1.47-1 includes rules for recomputing the Section 38 credit and determining recapture liability upon a recapture event. CCA 201507020 (Jan. 8, 2015) also explains the consequences of a recapture event under the investment tax credit. In general, these authorities provide that a recapture event requires a recomputation of the Section 38 credit for the year in which the credit was originally claimed and any other year affected by the credit. If the recomputation leads in the aggregate to a decrease in the credits that actually reduce tax for the credit year and any other

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taxable year affected by the reduction in the credit (*i.e.*, the actual tax benefit from the claimed credits), then the income tax for the recapture year is increased by the amount of the decrease in credits that resulted in an actual tax benefit. *See* Section 1.47-1(a)(i). This approach results in a recapture liability that is based on the actual tax benefit that the taxpayer realized from claiming the credits that are to be recaptured due to a subsequent recapture event. By comparison, Section 1.45Q-5(e) and (g), as currently drafted, could be read to require taxpayers to add to their tax due in the year of the recapture event a "recapture amount" that has no relation to the actual tax benefit that the taxpayer received from claiming Section 45Q credits from the leaked qualified carbon oxide.

Oxy recommends that Treasury and IRS revise Section 1.45Q-5(e) and (g) to base the "recapture amount" on the actual tax benefit from the Section 45Q credits claimed with respect to the leaked qualified carbon oxide. In addition, the revision should specify that where Section 45Q credits with respect to the leaked qualified carbon oxide reside in an unused Section 38 credit carryover, the Section 38 credit carryover must be recomputed, in light of the ordering rule in Section 38(d), to remove the Section 45Q credit associated with the leaked qualified carbon oxide.

E. Pro Rata Allocation

Section 1.45Q-5(g) of the proposed regulations sets forth the application of the recapture rules. The rules address recapture where the leaked qualified carbon oxide had been captured from multiple units of carbon capture equipment that were not under common ownership (Section 1.45Q-5(g)(3)) and where the leaked amount of qualified carbon oxide is deemed attributable to qualified carbon oxide with respect to which multiple taxpayer claimed section 45Q credit amounts (Section 1.45Q-5(g)(4)). In both of these situations, the proposed regulations provide that the recapture amount will be allocated on a pro rata basis between the multiple units or multiple taxpayers.

Oxy supports the pro rata allocation of leaked qualified carbon oxide among multiple sources and taxpayers in Section 1.45Q-5(g) of the proposed regulations. Because it is impractical to require tracing leaked carbon oxide back to the carbon oxide supplied by a particular taxpayer or source, and in light of the deemed attribution of leaked carbon oxide to that injected in prior years on a LIFO basis, the pro rata allocation of recaptured credit amounts among multiple sources and taxpayers in the relevant prior years is a reasonable approach. However, Oxy suggests that the final regulations clarify that, in determining that amount of "qualified carbon oxide" that has leaked to the atmosphere pursuant to the facts and circumstances inquiry under Section 1.45Q-5(c), it also may be necessary to make a pro rata allocation of leaked carbon oxide between "qualified" and "non-qualified" carbon oxide that was injected during the relevant prior year.

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Oxy seeks clarification that pro rata allocation would also apply to situations where a portion of the leaked qualified carbon oxide is attributable to qualified carbon oxide for which Section 45Q credits were taken under both the pre-2018 Section 45Q credit regime and the 2018 Section 45Q credit regime. Oxy suggests adding an example to Section 1.45Q-5(g)(6) to illustrate this point as follows:

> Example 7. P owns two industrial facilities. Facility R has a placed-in-service date of January 1, 2017. Facility S has a placed-in-service date of January 1, 2020. Each facility captured 500,000 metric tons of carbon dioxide annually in 2020 for a total of 1,000,000 metric tons of carbon dioxide captured. All captured carbon dioxide was sold to T for use as a tertiary injectant in a qualified enhanced oil recovery project. P claimed section 45Q credits under the old Section 45Q credit for the qualified carbon dioxide captured at Facility R and claimed section 45Q credits under the new Section 45Q credit for the qualified carbon oxide captured at Facility S. No carbon dioxide is captured in 2021. In 2021, T determined that 6,000 metric tons of carbon dioxide previously injected had leaked from the containment area of the reservoir and will eventually migrate to the atmosphere. Taxpayer P would be required to recapture the credits attributable to the leaked carbon dioxide on a pro rata basis, such that 3,000 metric tons of the leaked carbon dioxide would be recaptured under the old credit, and 3,000 metric tons of the leaked carbon would be recaptured at the new Section 45Q credit amount.

Oxy further seeks clarification that pro rata allocation will apply when the leaked carbon oxide is partially attributable to qualified carbon oxide for which the taxpayer claimed a Section 45Q credit and the remaining leaked carbon oxide is not qualified carbon oxide for which the taxpayer sought a credit. In that situation, the taxpayer should recapture only the credits received for the leaked qualified carbon oxide; no recapture applies with respect to the non-qualified carbon oxide for which no credit was claimed. Oxy suggests adding an example to Section 1.45Q-5(g)(6) to illustrate this point as follows:

> Example 8. Taxpayer U owns Facility V. Facility V captures carbon dioxide that is qualified carbon oxide under Section 45Q. In 2020, Facility V captures 100,000 of such qualified carbon oxide, which it sells to W for use as a tertiary injectant in a qualified enhanced oil recovery project. W provides contractual assurance that the qualified carbon oxide will be sequestered in secure geological storage. In 2020, W injects 200,000 metric tons of carbon dioxide, consisting of 100,000 metric tons of qualified carbon oxide that Taxpayer U captured at Facility V, and 100,000 metric tons of non-qualified carbon dioxide from other sources. In 2021, Facility V captures no qualified carbon oxide, and W injects no carbon dioxide. Also in 2021, it is determined that 10,000 of carbon dioxide previously injected leaked from the containment area of the reservoir and will eventually migrate to the atmosphere. Taxpayer U must allocate the 10,000 of carbon dioxide leaked in 2021 between the qualified carbon oxide and non-qualified carbon dioxide injected by W in 2020 on a pro rata basis. Taxpayer U reports a recapture event in 2021 and

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computes its potential recapture liability based on 5,000 of leaked qualified carbon oxide for which it claimed a Section 45Q credit in 2020.

III. Treating Carbon Dioxide Molecules as Fungible

Oxy requests that the IRS more explicitly state in the final regulations that carbon dioxide captured and measured at a qualified facility and transported via a shared pipeline or stored at a facility with other carbon dioxide should be treated as the same carbon dioxide when it is removed from the pipeline or storage facility at another location, verified in amount, and disposed of, injected, or utilized. In other words, Oxy requests confirmation that carbon dioxide is fungible for purposes of Section 45Q and there is no requirement to trace specific carbon dioxide molecules as they travel through a common pipeline network or storage facility from the point of capture to the point of disposal. Treating carbon dioxide as fungible is the only practical way to deal with the common industry practice of transporting carbon dioxide via pipeline and storing it at facilities where it commingles with carbon dioxide from other sources. It is not practical or even possible to distinguish one group of carbon dioxide molecules from another for purposes of tracing carbon dioxide back to carbon dioxide captured at a particular facility or time. (Note that the fungibility of carbon dioxide applies not only with respect to molecules injected on different dates, but also with respect to carbon dioxide molecules that constitute "qualified carbon oxide" and those carbon dioxide molecules that do not constitute qualified carbon oxide because, for instance, they originated from a non-qualified facility.)

The definition of "qualified carbon oxide" in the statute and Section 1.45Q-2(a) of the proposed regulations requires measurement at the source of capture and verification at the point of injection. These provisions recognize that qualified carbon oxide must be transported from the source of capture to the point of injection. In the EOR industry, such transportation is typically via common carrier pipeline systems. All carbon dioxide entering these pipeline systems must meet specifications for chemical composition and is treated as fungible for commercial purposes. Contracts among the pipeline carriers, shippers, and offtakers specify the amounts of carbon dioxide put into the system at various source points and the amounts to be withdrawn at EOR fields for use as a tertiary injectant. The party who delivers carbon dioxide to a pipeline is treated as the owner of the carbon dioxide removed from the pipeline, if the contracts so provide, even though the same molecules of carbon dioxide are not, and practically cannot be, the same molecules as those delivered. Depending on the contractual arrangements, the capturer, pipeline owner, and the EOR operator (or sequesterer), may take title to the carbon dioxide at different times as the carbon dioxide moves through the system.

The proposed regulations already include provisions recognizing that carbon dioxide from multiple sources will be commingled in the process of transportation, disposal, and use as a tertiary injectant. These provisions do not require tracing comingled molecules back to their original source; they treat carbon dioxide as fungible. First, Section 1.45Q-2(c)(3) of the proposed regulations recognizes that carbon oxide will be transported away from qualified

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facilities via pipelines used to transport carbon oxide from multiple taxpayers and projects. Second, the proposed regulations apply the fungibility concept in Section 1.45Q-5(g) for purposes of calculating, allocating, and reporting recapture, as discussed above. Example 2 (Section 1.45Q-5(g)(6)(ii)) illustrates this when it deems leaked carbon oxide to be attributable to the most recent years for purposes of computing recapture (LIFO approach). Third, under Section 1.45Q-5(g)(3) of the proposed regulations leaked carbon oxide is allocated on a *pro rata* basis among multiple units of carbon capture equipment under different ownership. The proposed regulations do not require that the taxpayers identify and report which particular molecules of carbon oxide leaked or to determine the owner of each molecule for purposes of allocating recapture. Instead, the proposed regulations treat carbon oxide molecules as fungible.

Oxy requests that the regulations explicitly provide that carbon dioxide transported or stored in shared pipelines or facilities meets the definition of qualified carbon oxide in Section 1.54Q-2(a), so long as the amount of carbon dioxide (as opposed to the particular molecules) is measured at the source of capture and verified at the point of disposal, injection, or utilization. Specifically, Oxy suggests that the definition of qualified carbon oxide in Section 1.45Q-2(a) of the proposed regulations be amended in the final regulations to include the following:

> (4) Any carbon dioxide or other carbon oxide that is commingled with other carbon dioxide or other carbon oxide during transportation in a common pipeline network or shared storage facility may be qualified carbon oxide as long as it meets one of the definitions in (a) through (c) of this section. A taxpayer does not need to trace the specific molecules that it puts into a shared pipeline or storage facility to be eligible for the credit.

IV. Secure Geological Storage (Prop. Treas. Reg. §1.45Q-3)

Proposed Section 1.45Q-3 prescribes the rules for establishing disposal of qualified carbon oxide in secure geological storage. The proposed regulations include storage, documentation, and certification requirements. The storage requirement gives taxpayers who are injecting qualified carbon oxide as part of an EOR project the option of storage in compliance with subpart RR of the EPA's Greenhouse Gas Reporting Regulations (GHGRP), 40 CFR subpart RR, or storage in compliance with the ISO standard in CSA/ANSI ISO 27916:19 (the "ISO standard"). In either case, the EOR operator also must inject into wells that comply with the applicable Underground Injection Control Regulations. 40 CFR part 144 et seq. The choice of storage regime—subpart RR or ISO—affects the certification requirement under the proposed regulations: those reporting to the EPA under Subpart RR can self-certify the volume of carbon oxide claimed for purposes of Section 45Q, while those who follow the ISO standard must submit annual certifications from a qualified independent engineer or geologist that their ISO documentation is accurate, including mass balance calculations, information on monitoring and containment assurance, and measurement of any leakage.

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Oxy supports the Treasury Department and the IRS's continued use of Subpart RR of the GHGRP regulations as a standard for establishing secure geological storage and reporting the amount of qualified carbon oxide sequestered through the year. As Treasury and IRS observed in the preamble to the proposed regulations, persons reporting to the EPA under Subpart RR not only must report to the EPA carbon dioxide received for injection, but also must develop and implement an EPA-approved monitoring reporting and verification (MRV) plan and report to EPA the amount of carbon dioxide geologically sequestered using a mass balance approach and their annual monitoring activities. These computations of the mass of carbon dioxide geologically sequestered are certified to the EPA and published on the EPA's GHGRP web site. This EPA oversight and public reporting ensures accountability and transparency, which helps to enhance public trust in the amounts reported as sequestered under Subpart RR and the utility of Section 45Q.

Section 1.45Q-3(b) of the proposed regulations also allows taxpayers to establish secure geological storage through compliance with the ISO standard. The EPA does not administer the ISO standard and, as noted in the preamble to the proposed regulations, there is no statutory requirement that taxpayers using the ISO standard publicly display this information or otherwise make it available. Accordingly, the EPA conducts no oversight over a taxpayer's compliance with the ISO standard, and there is no public disclosure of the ISO documentation. The proposed regulations therefore require taxpayers claiming secure geological storage based on the ISO standard to submit to the IRS annual certifications of compliance with the ISO standard from a qualified independent engineer or geologist. The independent certification requirement serves as a substitute for EPA oversight and public reporting under Subpart RR, but it cannot create the same EPA oversight and public disclosure regarding the mass of carbon dioxide claimed as sequestered, monitoring and containment assurance, and recapture as reporting under subpart RR. Nevertheless, the proposed regulation does ensure that these computations are reviewed each year by a qualified, independent expert, which should provide some assurance to the public and stakeholders regarding the efficacy of taxpayers' secure geological storage. Accordingly, Oxy supports the adoption in the final regulations of this requirement to have a qualified independent engineer or geologist annually certify compliance with the ISO standard.[2]

V. Exclusion of Production From Natural Carbon Oxide-Bearing Formations or Springs, and Manufacturing Process (Prop. Treas. Reg. §§ 1.45Q-2(d)(1) and (3))

The definition of "industrial facility" under the proposed regulations excludes facilities that produce carbon dioxide from carbon dioxide production wells at natural carbon dioxide-bearing formations. Whether a well is producing from a natural carbon dioxide-bearing formation is determined based on the facts and circumstances, except that wells producing from

[2] Oxy agrees that adopting state rules for secure geological storage would be unwieldy and administratively burdensome.

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natural gas deposits of less than 10 percent carbon dioxide are automatically outside this exclusion. Where production from a natural gas deposit containing carbon dioxide is subject to a manufacturing process, such as where a gas plant produces methane for sale or other commercial purposes, the carbon dioxide captured in the manufacturing process is qualified carbon oxide. Oxy supports the approach taken in the proposed regulations' definition of industrial facility, including the exclusion for wells producing carbon dioxide from natural carbon dioxide-bearing formations and the recognition that carbon dioxide captured at a gas plant that produces natural gas for sale or commercial use is the product of a manufacturing process. Oxy suggests adding another example to proposed Section 1.45Q-2(d)(4) to illustrate this point.

The proposed regulations include an example, Section 1.45Q-2(d)(4), to illustrate the exclusion for wells producing from a natural carbon dioxide-bearing formation in the absence of a manufacturing process to produce products other than carbon dioxide. The negative implication of the example is that, had the manufacturing process produced methane for sale at a profit or other commercial use, the captured carbon dioxide would be qualified carbon oxide. Oxy seeks clarification as to what the proposed regulations mean by the phrase "used for a commercial purpose." Oxy suggests that the definition of "used for a commercial purpose" include use to power industrial, electricity generating, direct air capture, or other parts of a facility.

Oxy suggests adding the following two examples to Section 1.45Q-2(d)(4) to illustrate application of the proposed regulations to manufacturing processes that produce products for sale at a profit and produce products for other commercial purposes:

> (ii) Example 2. Assume the same facts as Example 1, except that in year 1, Taxpayer B constructs processing equipment that separates the raw gas into carbon dioxide and methane with the intent to sell both the carbon dioxide and methane at a profit. In year 5, the market for methane declines and Taxpayer B is unable to sell the methane at a profit. Taxpayer B intended to sell both the carbon dioxide and the methane at a profit, so the separation process applied to the gases is a manufacturing process within the meaning of paragraph (d)(3). The carbon dioxide captured by the process is qualified carbon oxide notwithstanding that market conditions prevented sale of the methane at a profit in year 5.
>
> (iii) Example 3. Assume the same facts as Example 1, except that the methane is used at Taxpayer B's cement plant to power its equipment. If the methane was not used to power the processing equipment, Taxpayer B would need to purchase fuel in the marketplace to power the equipment. The methane in this example is a product manufactured to be used for a commercial purpose. Because the methane is manufactured to be used for a commercial purpose, the separation process applied to the gases is a manufacturing process within the meaning of (d)(3). The carbon dioxide captured by the process is qualified carbon oxide.

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Section 1.45-2(g) of the proposed regulations defines "qualified facility" to include any "industrial facility," electricity generating facility, or direct air capture facility. Section 1.45Q-2(d) of the proposed regulations defines an "industrial facility" as a facility that produces a carbon oxide stream from a fuel combustion source or fuel cell, a manufacturing process, or a fugitive carbon oxide emission source that, absent capture and disposal, would otherwise be released into the atmosphere as industrial emission of greenhouse gas or lead to such release. Oxy recommends that the IRS clarify what is meant by "a fugitive carbon oxide emission source." Oxy suggests that the IRS use the definition from the EPA's Clean Air Act regulations, 40 CFR § 57.103(m), which defines fugitive emissions as "any air pollutants emitted to the atmosphere other than from a stack."

VI. Scope of "carbon capture equipment" definition (Prop. Treas. Reg. §§1.45Q-1(g)(3), 1.45Q-2(c), and 1.45Q-2(g)(5))

Proposed Section 1.45Q-2(c) uses a functional definition of the term "carbon capture equipment" and includes all components of property that are used to capture or process carbon oxide until the carbon oxide is transported for disposal, injection, or utilization. Oxy generally agrees with the functional approach because it explains what types of equipment will qualify, while also allowing for the inclusion of new technologies as they develop. However, the combination of the broad "all components" language in Section 45Q-2(c) of the proposed regulations followed by specification of the uses of carbon capture equipment and components of carbon capture equipment in Sections 1.45Q-2(c)(1) and (2) could create confusion regarding the scope of the equipment that a taxpayer must own to claim Section 45Q credits. In particular, the definition could cause confusion when applied to components owned by different parties that perform sub-functions within the overall carbon capture and treatment process. The proposed definition also does not differentiate between equipment that may already exist at an industrial facility that generates a carbon oxide stream, such as exhaust stacks and pollution control equipment, and equipment installed to capture and process that carbon oxide as part of a carbon capture and sequestration project. Finally, the definition could create confusion when applying the 80/20 Rule under Sections 1.45Q-1(g)(3) and 1.45Q-2(g)(5). As explained below, Oxy believes that all components that make up a process train should be treated as one piece of carbon capture equipment for purposes of the definition. Where multiple taxpayers own different components within the process train, the taxpayer owning the majority by value should claim the credit.

Section 1.45Q-2(c) of the proposed regulations states "[i]n general, carbon capture equipment includes all components of property that are used to capture or process carbon oxide until the carbon oxide is transported for disposal, injection, or utilization." Under the proposed definition, multiple, distinct pieces of equipment that operate together as part of a process train to capture, treat, and compress a single stream of carbon oxide from an industrial facility are all carbon capture equipment. Moreover, the proposed definition arguably encompasses components that are necessary for the processes performed by the industrial facility itself and are not installed

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as part of a carbon oxide capture and sequestration project. If separate components are owned by separate taxpayers, it would be inappropriate for each owner to claim a credit for the captured carbon oxide, resulting in multiple credit claims for the same carbon oxide. The final regulations should address the taxpayer to whom the credit is attributable when there are multiple owners of components in a single process stream. Where there is a process train that includes multiple pieces of equipment with different owners, the IRS should clarify that only one party is entitled to the Section 45Q credit and that the taxpayer owning the majority of the process train by value should claim the credit.

The proposed regulation then goes on, in Subsections 1.45Q-2(c)(1)-(3), to specify that carbon capture equipment includes equipment used for various functions (*i.e.*, separating, purifying, drying, or capturing carbon oxide that would otherwise be released into the atmosphere from an industrial facility, removing carbon oxide from the atmosphere via direct air capture, or compressing or otherwise reducing the pressure of carbon oxide) and various components of property used for these processes (e.g., absorbers, compressors, conditioners, cooling towers, dehydration equipment, engines, filters). Although Oxy appreciates the attempt to provide a list of carbon capture equipment components in Section 1.45Q-2(c)(2), Oxy believes that the list will result in more confusion in practice. Therefore, Oxy suggests that the IRS delete Section 1.45Q-2(c)(2) from the final regulations. Similarly, Section 1.45Q-2(3) lists "excluded components." Oxy agrees that land and marine transport vessels should not qualify as components of carbon capture equipment for purposes of the credit. However, Oxy finds the exclusion of pipelines and branch lines in the first sentence of Section 1.45Q-2(c)(3) and the exception to that exclusion in the second sentence of the same subsection to be confusing. Oxy proposes that Section 1.45Q-2(c)(3) be rewritten as follows:

> (3) Excluded components. Carbon capture equipment do not include land and marine transport vessels use for transporting captured qualified carbon oxide for disposal, injection of utilization. Pipelines and branch lines are also excluded, except where they are part of a gathering and distribution system that collects carbon oxide captured from a qualified facility or multiple facilities that constitute a single project (as described in section 8.01 of Notice 2020-12, 2020-11 I.R.B. 495 (see §601.601(d)(2)(ii) of this chapter)) and used for the purpose of transporting that carbon oxide away from the qualified facility or single project to a pipeline that transports carbon oxide from multiple taxpayers or projects.

Similarly, the final regulations should exclude from the definition of "carbon capture equipment" any components that are used as part of the processes performed by an industrial facility, itself, and would be part of the industrial facility regardless of a carbon oxide capture and sequestration project.

The definition of carbon capture equipment also affects application of the 80/20 rule in Section 1.45Q-2(g)(5) of the proposed regulations. Under the 80/20 rule, carbon capture

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equipment may qualify as originally placed in service even if it contains some used components or property, provided that the fair market value of the used components of property is not more than 20 percent of the qualified carbon capture equipment's total value (i.e., the capitalized cost of new components plus the fair market value of used components). To apply the 80/20 rule and determine the placed-in-service date for carbon capture equipment, therefore, taxpayers will need to know the scope of the relevant carbon capture equipment.

Examples 1-3 in Prop. Treas. Reg. § 1.45Q-1(g)(4) imply that the relevant unit of carbon capture equipment for purposes of the 80/20 rule is an independently functioning process train. In these examples, taxpayer owns a qualifying facility with three units of carbon capture equipment. Each unit can function independently from the other two units to capture, process, and prepare for transport 50,000 metric tons of carbon oxide per year. Oxy supports this approach of treating each independently functioning process train as the relevant unit for purposes of applying the 80/20 rule. Carbon capture equipment at a qualified facility will often be part of an independently functioning process train, and each process train may include various components or pieces of carbon capture equipment used together in a sequence of stages to capture and process carbon oxide up until the point of transportation. An individual piece of carbon capture equipment often cannot function independently of the process train to capture and prepare carbon oxide for transportation. A process train may consist of both used and new equipment. Oxy believes that all components that make up a process train should be treated as one piece of carbon capture equipment for purposes of applying the 80/20 rule, so that if no more than 20 percent of the process train is used equipment, the entire process train will qualify as new carbon capture equipment for purposes of determining the placed-in-service date.

Further, Oxy seeks clarification that if taxpayers purchase used equipment from the marketplace, which the taxpayer itself had not previously placed in service, the equipment will qualify as new equipment counted towards the 80 percent (with a valued based on cost) for purposes of the 80/20 rule.

VII. The definition of "qualified facility" and aggregation (Prop. Treas. Reg. § 1.45Q-2(g))

Treasury and the IRS should confirm explicitly in the final regulations that for purposes of meeting the Section 45Q(d)(2) threshold levels for a qualified facility, all carbon oxide captured at an industrial facility or direct capture facility will be considered together, even if the carbon oxide will be subject to different levels of credits. For example, if some of the captured carbon oxide will be used for EOR and the remaining captured carbon oxide will immediately be disposed of in secure geological storage, the total amount of captured carbon oxide should be aggregated for purposes of determining whether the facility meets the definition of a qualified facility.

The final regulations also should provide certainty to taxpayers regarding the carbon oxide that is included in meeting the capture thresholds in Section 45Q(d)(2), which defines the

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thresholds in terms of an industrial facility or direct air capture facility "which captures" the required amounts of carbon oxide in different circumstances. Generally, the facility emits the carbon oxide, and the carbon oxide is captured by carbon capture equipment. The final regulations should confirm that carbon oxide captured using different carbon capture equipment at multiple sites in an industrial facility or direct air capture facility is aggregated for purposes of meeting the thresholds under Section 45Q(d)(2).

Oxy believes that Example 3 in Section 1.45Q-2(g)(2)(iii) of the proposed regulations demonstrates aggregation of carbon oxide eligible for two different levels of Section 45Q credits. The first portion of equipment in the example is located at a plant that captures 10,000 metric tons of carbon oxide utilized in a manner consistent with section 45Q(f)(5), which would generate qualified carbon oxide eligible for the lower dollar per metric ton credit under Section 45Q(b)(1)(A)(i)(II). The second portion of the equipment in the example captured 90,000 metric tons of carbon oxide that is disposed of in secure geological storage, which would generate qualified carbon oxide that is eligible for the higher dollar per metric ton credit under Section 45Q(b)(1)(A)(i)(I). The example allows the carbon oxide captured by both sets of equipment to be aggregated to equal 100,000 metric tons per year, such that it meets the 100,000 metric ton threshold under Section 45Q(c)(2)(C).

The IRS also appears to have anticipated aggregation in Notice 2020-12. In Notice 2020-12, gas gathering lines are included as part of the definition for carbon capture equipment. Gathering lines collect gas from different points and bring it together for processing. This envisions that, for example, carbon oxide captured from different parts of an industrial facility would all be combined together before arriving at the carbon oxide processing facility.

To determine the scope of an industrial facility or direct air capture facility for purposes of aggregation, Oxy suggests that the final regulations include a facts and circumstances test to determine whether the operations or economics of the activities generating carbon oxide are integrated. This inquiry should recognize that multiple capture sites may be aggregated if they are economically integrated in a manner consistent with the purpose of Section 45Q, even if the sites are not operationally interdependent. The IRS could build on factors used to determine whether multiple qualified facilities or units or carbon capture equipment are part of a single project for purposes of determining the beginning of construction. *See* IRS Notice 2020-12, 8.10(1). Similar factors could be used to determine whether carbon oxide captured at multiple capture sites within an industrial facility should be aggregated. The factors from the notice are:

> (1) the qualified facilities or units of carbon capture equipment are owned by a single legal entity;
>
> (2) the qualified facilities or units or carbon capture equipment are constructed in the same general geographic location or on adjacent or contiguous pieces of land;

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(3) a single system of gathering lines or a single off-take operation is used to collect and deliver carbon oxide to a transportation pipeline;

(4) carbon oxide captured from the qualified facilities is disposed of, utilized, or used as a tertiary injectant pursuant to a shared contact;

(5) the qualified facilities or units of carbon capture equipment are described in one or more common environmental or other regulatory permits or are required to collectively report their activities;

(6) the qualified facilities or units of carbon capture equipment were constructed pursuant to a single contract providing FEED or similar services covering the full scope of the single project;

(7) the qualified facilities or units of carbon capture equipment were constructed pursuant to a single master construction contract; and

(8) the construction of the qualified facilities or units of carbon capture equipment was financed pursuant to the same loan agreement.

Another issue regarding aggregation is how to deal with electric power generation that is integrated into an industrial facility or direct air capture facility. Section 45Q(d)(2) provides a higher carbon oxide capture threshold for electricity generating facilities. Some industrial facilities and direct air facilities will require a significant amount of power and may include electric power generation capacity to help power the facility. The power generation components at the industrial facility or direct air capture facility may generate carbon oxide, which the taxpayer may also capture and sequester. A facility that generates or cogenerates electric power in this way should not be subject to the higher capture threshold applicable to electricity generating facilities. Oxy believes that when the principal function of the power generation component of an industrial facility or direct air capture facility is to provide power for that facility, it should be treated as part of that facility. Moreover, the regulations should specify that carbon oxide captured from the power generation components of an industrial facility are to be aggregated with other carbon oxide captured at the industrial facility for purposes of the qualified facility thresholds.

VIII. Utilization of Lifecycle Analysis (LCA) (Prop. Treas. Reg. § 1.45Q-4)

Section 1.45Q–4(c) of the proposed regulations states that the term "lifecycle greenhouse gas emissions" means the aggregate quantity of greenhouse gas emissions (including direct emissions and significant indirect emissions such as significant emissions from land use changes) related to the full product lifecycle, including all stages of product and feedstock production and distribution, from feedstock generation or extraction through the distribution and delivery and

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use of the finished product to the ultimate consumer, where the mass values for all greenhouse gases are adjusted to account for their relative global warming potential according to Table A–1 of 40 CFR part 98 subpart A, as required by Section 45Q(f)(5)(B)(ii). This definition, in particular the inclusion of all stages of feedstock generation, could potentially be interpreted to say that any greenhouse gas captured along with carbon oxides that are utilized can qualify for the credit based on its carbon oxide equivalence, perhaps with utilized carbon oxides only representing a small proportion of the carbon oxide equivalence claimed. However, such an interpretation would be inconsistent with the 45Q statute: Section 45Q(a)(4) states that utilization is a process that occurs *after* the capture of qualified carbon oxides, and the definition of utilization in Section 45Q(f)(5)(A) and Section 1.45Q–4 of the proposed regulations describes utilization as processes fixing, converting, or directly using *qualified carbon oxide*. The IRS recognized this inconsistency by stating in the proposed regulations that "[a]lthough the section 45Q credit is only available with respect to qualified carbon oxides, all greenhouse emissions are taken into account under this analysis." Further clarification on this issue is needed in the final rule.

In the proposed regulations, the IRS requested comments on how to achieve consistency in boundaries for lifecycle analysis. We believe that to reconcile the statutory definition of utilization with the requirement to take all greenhouse gases into account in the lifecycle analysis the final regulations should set the boundary for the lifecycle analysis at the beginning of the utilization process, and after the capture of the qualified carbon oxide. If the utilization of the qualified carbon oxide results in emissions of other greenhouse gases they should be taken into account in the lifecycle analysis in carbon oxide equivalence, but the capture of greenhouse gases other than carbon oxides should not fall within the lifecycle analysis. We request that IRS clarify the boundaries of the lifecycle analysis and how other greenhouse gases should be taken into account in the lifecycle analysis of the utilization process, with examples addressing the situation raised in these comments.

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Oxy appreciates the opportunity to provide comments regarding REG-112339-19. If you have any questions regarding this submission, please contact Vincent A. Alspach at (713) 366-5693 or Vincent_Alspach@oxy.com.

Sincerely,

Vincent Alspach

Vincent A. Alspach