No. 11-2552

REPLY BRIEF FOR THE APPELLANT,
UNION CARBIDE CORPORATION AND SUBSIDIARIES,

IN THE UNITED STATES COURT OF APPEALS
FOR THE SECOND CIRCUIT

UNION CARBIDE CORPORATION AND SUBSIDIARIES,

Petitioner-Appellant

v.

COMMISSIONER OF INTERNAL REVENUE,

Respondent-Appellee

Appeal from the United States Tax Court
Docket No. 11119-99,
Judge Joseph Robert Goeke

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ARGUMENT

I. The IRS Abandons The Tax Court's Unprecedented Reading Of IRC § 41(d)(2)(C), Instead Offering A Different Rationale To Support The Result It Desires Based On Language Found In Treas. Reg. § 1.41-2(b)(1).

The Tax Court found, and Appellee ("the IRS") does not dispute, that the supplies at issue in this appeal were absolutely necessary to conduct the Amoco anticoking and UCAT-J experiments. As Appellant ("UCC") discussed in its brief ("UCC Br."), under any normal definition of the word "used," the supplies were "used in the conduct of qualified research," and, therefore, were qualified research expenditures ("QREs") under IRC § 41(b)(2)(A)(ii). UCC Br. at 32-34. But the Tax Court in its Memorandum Opinion ("Op.") came to a contrary conclusion based on an entirely unprecedented reading of IRC § 41(d)(2)(C). The IRS never argued for this reading of IRC § 41(d)(2)(C); indeed, the meaning of this provision was never raised by the Tax Court with the parties and was never briefed. It is significant that, in the nearly three years since the Memorandum Opinion was issued, the IRS has not issued any regulation, revenue ruling or policy statement adopting the Tax Court's unprecedented reading of § 41(d)(2)(C).

The Tax Court's construction and application of IRC § 41(d)(2)(C), however, was critical to its decision denying UCC the supplies it used to conduct manufacturing process research

at its operating plants. UCC's principal brief, therefore, is devoted to why the Tax Court's reading of IRC § 41(d)(2)(C) is statutorily incorrect, unsupported by the legislative history, and problematic from a policy standpoint.

The IRS does not in its brief ("IRS Br.") defend the Tax Court's analysis based on IRC § 41(d)(2)(C). Rather, it asks this Court to affirm the Tax Court's decision based on an alternative rationale; namely, that all the supply costs at issue are "indirect research expenditures" within the meaning of Treas. Reg. § 1.41-2(b)(1). The IRS walks a fine line in that regard in that it never expressly disavows the Tax Court's reading of IRC § 41(d)(2)(C), and even suggests that this reading is consistent with its "indirect research expenditures" argument based on Treas. Reg. § 1.41-2(b)(1). But the two rationales are not consistent – particularly with regard to supplies used in the conduct of product (as distinct from process) research; a point the IRS undoubtedly understands but does not acknowledge in its brief.

Under the IRS's alternative rationale, supplies used to manufacture a product would be ineligible for QRE treatment whether used in the conduct of qualified process research or qualified product research. Thus, the IRS not only seeks to have this Court affirm the outcome of the Tax Court's decision below, but asks this Court to do so on the basis of an

alternative reading of IRC § 41 that would permit it to disallow supply costs in almost all circumstances involving manufacturing plant-based research where the supplies used in the conduct of the qualified research also are used to manufacture a product.

II. The Supplies That Were Physically Part Of And Absolutely Necessary To Conduct The Amoco Anticoking And The UCAT-J Projects Were Not "Indirectly" Used In The Conduct Of Those Qualified Research Activities.

The IRS argues that the phrase "indirect research expenditures" found in Treas. Reg. § 1.41-2(b)(1) precludes a manufacturer conducting qualified research in an operating plant from obtaining the cost of the supplies used to conduct that research unless those supplies were purchased solely to perform the research.[1] The IRS contends that any supplies purchased to manufacture product constitute "indirect research expenditures" within the meaning of § 1.41-2(b)(1). The IRS argues that such supplies may allow the qualified research to take place, but are not "used" in the conduct of the qualified research.

In making this argument, the IRS mischaracterizes UCC's position in an effort to create a "straw man." UCC does not

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[1] In an effort to link its direct/indirect argument to legislative history, the IRS refers to the cost of supplies purchased solely to perform research as "incremental" costs. But that use of the term "incremental" is not found in the statute or regulations. As discussed in Section IV, infra, the legislative history uses the term "incremental" in an entirely different context.

contend that every condition that must pre-exist in order for an experiment to take place involves a "supply" within the meaning of Treas. Reg. § 41(b)(2)(A)(ii). Rather, it has and continues to be UCC's position that supplies that are physically part of and necessary to conduct a qualified experiment are "used in the conduct of qualified research" within the meaning of § 41(b)(2)(A)(ii). But not every condition that must pre-exist in order for the experiment to take place necessarily involves a supply used in the conduct of the experiment.

For example, if a laboratory scientist conducts an experiment to determine how two chemicals will react when combined, both chemicals are necessary for the conduct of the experiment. If one of the two chemicals is removed from the experiment, the experiment cannot physically be performed. The scientist may require a well lighted laboratory in order to measure out the proper amount of each chemical, observe the resulting chemical reaction, and take necessary measurements. But that does not make the electricity that lights the laboratory part of the experiment; that is, the electricity is not part of the experiment but simply permits the experiment to occur. The two chemicals, because they are physically part of the experiment, are supplies <u>directly</u> used in the conduct of the research. In contrast, the electricity to light the laboratory only <u>indirectly</u> supports the experiment.

The supplies at issue in the Amoco anticoking project and UCAT-J project were just as physically part of and necessary for the conduct of the experiment in those two qualified research activities as the two chemicals in the above example. They did not merely create a condition to allow the experiment to be conducted, but were physically part of the experiment. Had they been removed, the chemical and physical reactions necessary to evaluate the process change would not have occurred; any more than, in the above example, had one of the two chemicals been removed from that experiment. See generally Brief of Amici Curiae National Association of Manufacturers, American Chemistry Council and U.S. Chamber of Commerce, at 14 ("Supplies are a critical element of plant-scale process research because new processes require those supplies in order to test the processes for efficacy, efficiency, safety and environmental compliance.")

Specifically, with regard to the Amoco anticoking project, the ethane feedstock that was burned in the furnace as part of the research created the coke which then chemically reacted with the metal cracking coils that had been pretreated with the Amoco compound that was being tested. The ethane feedstock was physically part of and absolutely necessary to conduct the Amoco anticoking experiment. Similarly, with regard to the UCAT-J experiment, the ethylene and other co-monomers that reacted with the UCAT-J catalyst to create the polyethylene base resin in

each run, were physically part of and absolutely necessary for each experimental run to occur. The experimental runs could not have occurred if, for example, the ethylene had been removed any more than the experimental runs could have occurred had the UCAT-J catalyst been removed. The ethane feedstock and ethylene thus were directly used in the conduct of the respective qualified research activities.

The IRS does not acknowledge or deal with these realities in its brief. Rather, it compares the ethane feedstock used in the Amoco anticoking project and the ethylene used in the UCAT-J project to the electricity used to light the laboratory in the above example. The IRS argues that the ethane feedstock and ethylene were simply conditions that allowed the experiment to occur.[2] But, as shown above, that is a fundamentally false comparison that misrepresents the underlying record as well as the issue before this Court.

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[2] Citing one definition of the word "use" from Webster's ("to carry out a purpose or action by means of"), the IRS simply asserts that the supplies claimed by UCC "were not the means by which UCC carried out the qualified research." IRS Br. at 47. But this assertion is nonsensical. The ethane feedstock and ethylene were just as much a means to carry out the experiments as were the Amoco compound and UCAT-J catalyst.

III. The Treasury Regulation Cited By The IRS In Support Of Its Argument Does Not Support The "Incremental" Supply Cost Interpretation The IRS Now Asks This Court To Adopt. To The Contrary, Examples In The Regulation The IRS Ignores Show That The Term "Indirect" Does Not Have The Meaning The IRS Advocates In Its Brief.

As noted, the IRS bottoms its "incremental" cost argument on the phrase "indirect research expenditures" found in Treas. Reg. § 1.41-2(b)(1). The terms "direct" and "indirect," however, also are found elsewhere in Treas. Reg. § 1.41-2. The manner in which these two terms are used in the Regulation is inconsistent with the interpretation that the IRS now advocates in its brief. As explained below, the IRS simply ignores the examples contained in the Regulation regarding which services directly support and do not directly support qualified research – examples which cannot be reconciled with the IRS's current advocacy regarding the meaning of "direct" and "indirect."

Specifically, Treas. Reg. § 1.41-2(c)(3)(ii), which deals with what services are considered to be in "direct" support (and allowable) of qualified research activities and what services are considered to be in only in "indirect" support (and not allowable) of qualified research activities provides specific examples of what is considered "direct" versus "indirect." Thus, services in "direct" support include the services of the "persons engaging in actual conduct of qualified services," as well as persons directly supervising such persons. Specific

examples of "direct support of research includes the services of a secretary for typing reports describing laboratory results derived from qualified research, of a laboratory worker for cleaning equipment used in qualified research, of a clerk for compiling research data, and of a machinist for machining a part of an experimental model used in qualified research." Treas. Reg. § 1.41-2(c)(3)(ii). Significantly, the Regulation then provides:

> Direct support of research activities does not include general administrative services, or other services only indirectly of benefit to research activities. For example, services of payroll personnel in preparing salary checks of laboratory scientists, of an accountant for accounting for research expenses, of a janitor for general cleaning of a research laboratory, or of officers engaged in supervising financial or personnel matters do not qualify as direct support of research.

Id. (emphasis added).

Nothing in these examples speaks in terms of limiting allowable costs to "incremental" services. Nothing suggests that the services of the person conducting the research, or his direct supervisor, or the secretary typing the research report, or the laboratory worker cleaning equipment, or the clerk compiling the data, or the machinist machining the parts, qualify only to the extent the person was hired solely to conduct the research in question. To the contrary, each of these individuals presumably was hired and paid whether or not

they had performed the specific research activity for which the credit was being claimed. The term "direct" – particularly compared to the examples used to describe "indirect" services – refers not to their "incremental" role, but to whether they had a direct role in the conduct of the qualified research rather than an indirect and tangential role in those activities. That is what is meant by "direct" and "indirect," and not the meaning that the IRS now concocts for purposes of this appeal.

Moreover, as the IRS notes in its brief, the eligibility of the cost of supplies is governed by the very same principles as the eligibility of the cost of services, and thus should be interpreted consistently. See IRS Br. at 38, 50 ("Congress stated that supply costs and wage expenses are governed by the same principles as to eligibility for the research credit.") (citing H.R. Rep. 97-201). Indeed, in discussing the eligibility of supplies, Congress used the same examples the IRS ultimately incorporated in its regulations with respect to the eligibility of services. Specifically, in H.R. Rep. 97-201, Congress noted:

> By way of illustration, supplies eligible for the credit include supplies used in experimentation by a laboratory scientist, in the entering by a laboratory assistant of research data into a computer as part of the conduct of research, or in the machining by a machinist of a part of an experimental model. On the other hand, supplies used in preparing salary checks of laboratory scientists or in performing financial or accounting services for the taxpayer (even if related

> to individuals engaged in research) are not eligible for the new credit. Similarly, amounts paid to another person as computer user charges for use of a computer in the conduct of qualified research are eligible for the credit, but computer user charges paid for use of a computer for payroll preparation, routine data collection, market research, production quality control, etc., are not eligible."

Id. at 117-18 (1981), 1981-2 C.B. 352, 361-62.

The IRS's brief simply ignores the above examples regarding what services directly support and do not directly support qualified research. The conclusion is inescapable that the IRS recognized that these examples from § 1.41-2(c)(3)(ii)do not fit within its current advocacy regarding the meaning of term "indirect" in § 1.41-2(b)(1), and, consequently, chose to ignore these examples even though they are by far the best evidence of how that term is being used in the Regulation.

It also is particularly instructive that, in providing examples of what is "indirect," Treas. Reg. § 1.41-2(c)(3)(ii) specifically speaks in terms of "general administrative services, or other services only indirectly of benefit to research activities." The "direct" versus "indirect" test thus is not about whether the manufacturer would have purchased specific supplies (or hired a specific employee) anyway. Rather, the "direct" versus "indirect" test is about whether the specific supplies (or the specific services of the employee) were directly of benefit to the research activities in question,

or whether those supplies or services were only indirectly of benefit to the research activities in question. Here, the supplies in question undisputedly were directly of benefit of the research activities at issue since the supplies were part of the experiment itself and the research could not physically have taken place but for the use of those supplies.

In interpreting the meaning of "indirect" in § 1.41-2(b)(1) it also is important to consider the other terms used in conjunction with that term. Under the doctrine of noscitur a sociis, the meaning of an ambiguous term should be determined on the basis of the words or phrases surrounding it. See Jarecki v. G. D. Searle & Co., 367 U.S. 303, 307 (1961) ("The maxim noscitur a sociis, that a word is known by the company it keeps, while not an inescapable rule, is often wisely applied where a word is capable of many meanings in order to avoid the giving of unintended breadth to the Acts of Congress.") Here, given that the term "indirect expenditures" is used in conjunction with "general and administrative expenses," it is entirely appropriate to construe the term "indirect expenditures" as similar in meaning to "general and administrative expenses."

Finally, it bears emphasis that UCC's understanding of the term "indirect expenditures" is consistent with the way in which the terms "direct" and "indirect" are generally used in the context of incurred costs. See Webster's Third New Int'l

Dictionary 640, 1151 (2002) ("**direct cost** *also* **direct charge** n : a cost that may be computed and identified directly with a product, function, or activity and that usu. involves expenditures for raw materials and direct labor and sometimes specific and identifiable items of overhead — contrasted with *indirect cost*"); ("**indirect cost** *also* **indirect charge** n : a cost that is not identifiable with a specific product, function, or activity – contrasted with *direct cost*").

The IRS's citations to Treas. Reg. § 1.41-2(b)(2), which establishes a special rule regarding what utility expenses are allowable, does not suggest a contrary reading of the terms "direct" and "indirect." Indeed, the subsection does not even speak in terms of "direct" and "indirect," but in terms of when utilities – which are typically considered overhead – are to be treated as "general and administrative expenses," which, as noted, are not allowable.

In support of its argument, the IRS in its brief (at 34-35) cites Mayo Found. for Med. Educ. & Research v. United States, 131 S. Ct. 704 (2011). But regardless of what deference this Court may owe to the Treas. Reg. § 1.41-2, it owes no deference whatsoever to the IRS's interpretation of that regulation here to mean "incremental." That interpretation has never been the subject of a rulemaking or even a revenue ruling, but has been advanced only in the IRS's briefs in this case. See also

Robinson Knife Mfg. Co. v. Commissioner, 600 F.3d 121, 134 n.11 (2d Cir. 2010) (no Auer deference is due the IRS's interpretation of its regulation when the IRS has not argued for Auer deference in its brief; moreover, "[t]he Commissioner's reading of the regulation is contrary to the plain meaning of its text."). Given the IRS's decision to ignore the examples of "direct" and "indirect" in Treas. Reg. § 1.41-2(c)(3)(ii), "there are abundant 'reason[s] to suspect that the interpretation [in the agency's brief] does not reflect the agency's fair and considered judgment on the matter in question'". Id. (quoting Auer v. Robbins, 519 U.S. 452, 462 (1997)).

IV. The Legislative History Does Not Support The IRS's Attempt To Use Treas. Reg. § 1.41-2(b)(1) As A Basis For Denying QRE Treatment For The Supplies Used In The Conduct Of The Amoco Anticoking And UCAT-J Projects.

The IRS devotes much of its brief to contending that the legislative history supports its position that the cost of supplies that would have been purchased anyway by the manufacturer should not be treated as QREs even if those supplies were used in the conduct of qualified research activities. Much of the IRS's argument is based on citations to references in the legislative history to "incremental" increases in research. Without a doubt these references exist. However, the references refer to an entirely different point (as does the

use of the term "incremental") than what the IRS would have this Court believe. Congress wanted the research credit to incentivize increased levels of R&D, and accomplished that goal by requiring that the credit be computed using a base amount concept to ensure that the credit would reward manufacturers for increasing their R&D rather than simply maintaining the same level of R&D.[3] Each of those legislative history references regarding "incremental" R&D refers to this requirement in IRC § 41 that the research credit be computed using a base amount to ensure that the credit is provided on the increased (that is, "incremental") amount of R&D. The term "incremental," as used in the legislative history, has absolutely nothing to do with the IRS's argument regarding supplies a manufacturer purchased for production but used to conduct qualified research.

Specifically, the legislative history references cited by the IRS regarding the "incremental" nature of the credit are made in the context of the credit year QREs exceeding the base period QREs. See, e.g., H.R. Rep. 97-201, at 111, 1981-2 C.B. at 358; 135 Cong. Rec. 24331 (1989). Contrary to what the IRS implies, these references in the legislative history are not

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[3] The research credit is allowed only for QREs in the credit year in excess of comparable QREs incurred during the base period (1984-1988). See generally IRC § 41(c); Treas. Reg. § 1.41-3; Op. at 1252.

made in the context of "direct" versus "indirect" expenditures. Nonetheless, the IRS in its brief cites these legislative history references to the "incremental" nature of the research credit as if they support its "indirect expenditures" argument. See, e.g., IRS Br. at 37-38.[4]

The IRS also miscites the legislative history in arguing that the research credit "is not allowable for operating expenses that are incidental to the performance of research activities and would have been incurred in any event." IRS Br. at 45. The IRS cites H.R. Rep. 97-201, at 111, 1981-2 C.B. at 358, as support for this proposition. But the cited page does not support the proposition proffered by the IRS. Even more significantly, on the immediately preceding page, the House Ways and Means Committee approvingly quotes IRS § 174 regulations providing that R&D costs "includes generally 'all such costs incident to the development of an experimental or pilot model, a plant process, a product, a formula, an invention, ...'" H.R. Rep. 97-201, at 110, 1981-2 C.B. at 358 (emphasis added).

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[4] Similarly, the floor statement by Senator Danforth cited at IRS Br. 53 regarding the revenue effect of the bill came immediately after a statement by Senator Glenn noting that the credit would only be available for incremental research expenditure increases above a firm's three-year base level. 127 Cong. Rec. 17458 (1981).

In sum, the IRS's legislative history citations do not support the proposition that the IRS advances in its brief that allowable § 41 QREs are limited to "incremental" supplies that would not have been used in manufacturing a product.

V. The IRS's Other Arguments That IRC § 41 Limits The Research Credit To "Incremental" Supply Costs Are Equally Without Merit.

In its brief, the IRS makes various additional arguments that IRC § 41 limits the research credit to "incremental" supply costs; that is, that supplies used in the conduct of research do not qualify if those supplies were also used to manufacture product. These additional arguments are without merit.

For example, the IRS contends that "routine" costs should not be creditable, and then, without any support, simply defines the supplies at issue here to be such "routine" costs. IRS Br. at 39-40. In making this argument, the IRS ignores the fact that, when a manufacturer uses supplies to conduct plant-based research, those supplies, the equipment and the resulting product, are placed at risk. See UCC Br. at 38-41. That is not "routine," and the IRS's contention that supplies used in manufacturing research are necessarily "routine" is belied by the record and common sense.

In that regard, the IRS repeatedly mischaracterizes the record when it contends that UCC did not incur any production losses as a result of its research activities. IRS Br. at 41-

42. For example, there is absolutely no dispute that many of the experimental UCAT-J runs were aborted or were failures because of operational problems, and that the runs resulted in the production of substantial amounts of off-grade scrap.[5] See UCC Br. at 17-18.[6] With regard to the Amoco anticoking project, the experiment actually caused excessive coke deposits on furnace equipment downstream from the coils that had been treated with the Amoco compound. UCC Br. at 11. Contrary to

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[5] The IRS implies in its brief that this off-grade scrap was normal and, therefore, neither a cost nor risk of the UCAT-J runs. In fact, the evidence presented at trial was that the UCAT-J runs resulted in the production of a much higher amount of off-grade scrap. SEALED A846 (Rebuttal Report of Wendi Hinojosa); see also A1658, Tr. 1866-67 (UCAT-J runs presented a higher risk of off-grade product).

[6] The IRS claims in its brief (at 42) that "[t]here also is no evidence that UCC incurred additional supply costs as a result of the UCAT-J project." This is absolutely wrong. As noted in UCC's principal brief, there were substantial uncertainties surrounding UCC's ability to use the UCAT-J catalyst, which manifested in many problems and resulted in a number of runs that either had to be aborted or otherwise were deemed unsuccessful or only partially successful. UCC Br. at 16-18. Extensive evidence of these aborted runs and partial failures was presented at trial, as documented by the Tax Court in its Opinion. Op. at 1228-34. A detailed discussion of these failures can be found in the expert reports of Dr. Brockmeier (Exhibits 991-P & 992-P), at A692-711 and A749-57. The IRS cites the report (A888) of its expert (Dr. Allen) in support of its argument. But as Dr. Brockmeier noted in his rebuttal report: "Dr. Allen's logic reveals his unfamiliarity with the issues being grappled with in the UCAT-J runs. . . . Dr. Allen appears simply to *ignore* the numerous operating problems encountered during the runs at issue – many of which were so bad that the run had to be aborted." A754.

the IRS's unsupported assertion, there was substantial evidence at trial that plant experiments present significant risks to the supplies, equipment and end product.[7] Id. at 17-18, 38-41; see also Brief of Amici Curiae, at 14-18, 21-22.

The IRS also argues that the "business component" test found in IRC § 41(d), as well as the special rule for production processes found in § 41(d)(2)(C), support its "incremental" cost argument. IRS Br. at 49-50. But these provisions simply require that, in determining whether a particular activity constitutes "qualified research," the taxpayer must demonstrate that the activity is undertaken for the purpose of discovering information "the application of which is intended to be useful in the development of a new or improved business component . . . ." IRC § 41(d)(1)(B)(ii). As discussed at length in UCC's brief, the provisions are specifically directed at defining what activities are "qualified research," and do not address what

[7] The IRS also contends that, because UCAT-J ultimately decreased the cost of manufacturing polyethylene resin, UCC did not incur any costs. IRS Br. at 42. This is a specious argument, in that process experimentation by its very nature is designed to increase efficiency and decrease costs if successful. But that does not mean that the research to accomplish that goal did not require the manufacturer to incur significant expenses. Under the IRS's logic, successful R&D presumably would no longer qualify for the research credit.

costs are or are not allowable under § 41. See UCC Br. at 34-38, 47-51.[8]

Similarly, the IRS's argument based on the shrinking-back rule (which is only found in Treas. Reg. § 1.41-4(b)(2), and is not set forth in the statute) is entirely misplaced. IRS Br. at 49, 54. The purpose of the shrinking-back rule is to allow the taxpayer to obtain some credit for a research activity even where the taxpayer cannot, in the first instance, meet the qualified research requirements for the specific business component. The rule allows the taxpayer to apply the § 41(d) criteria to a subset element of the business component, and thereby potentially obtain a credit for that subset element. Significantly, the regulation states that "[t]he shrinking-back is not itself applied as a reason to exclude research activities from credit eligibility." Id. In other words, the shrinking-back rule defines the parameters of the business component with

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[8] The IRS contends that UCC is now trying to change its position that the UCAT-J project was process research. IRS Br. at 58 n.13. This is incorrect. UCC simply noted (as has much of the published literature) that the distinction between process research and product research is highly subjective, and that both types of research are often intertwined. UCC Br. 51-55. The Tax Court in its Opinion unfortunately placed an inordinate and unrealistic importance on the product/process distinction. See generally Brief of Amici Curiae, at 10-14.

regard to which the research credit may be claimed, but does not determine what supplies are used to conduct the experiment.[9]

Significantly, with regard to the IRS's argument regarding "routine" activities, IRC § 41(d)(4) defines what is considered to be "routine" for purposes of the research credit, and even refers to specific "routine" activities ("routine data collection," "routine or ordinary testing or inspection for quality control") as not constituting qualified research. See also Treas. Reg. § 1.41-4(c). At trial, the IRS argued that the Amoco anticoking and UCAT-J projects did not qualify as "qualified research" under IRC § 41(d)(4), and the Tax Court rejected those arguments on the basis of the evidence presented. See Op. at 1259-60, 1265. The IRS did not appeal those findings, and cannot now attempt to argue that these activities were really "routine" and thus not "qualified research" within the meaning of IRC § 41(d)(4).

Finally, the IRS argues that the cases cited by UCC in its brief (at 41-43) in fact support its position that the cost of supplies used to manufacture a product cannot qualify as QREs. But the decisions clearly do not support the IRS's position in

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[9] The testimony of Mr. Chapoton the IRS quotes on page 31 of its brief is simply a description of what ultimately became the shrinking-back rule. Because only a specific part of the personal computer (the new screen) was "experimental," the screen was treated as the relevant business component.

that, in each case, the court accepted the principle that the manufacturer could treat the cost of supplies used to manufacture a sold product as QREs under IRC § 41. The IRS argues that these cases are distinguishable, however, on the basis that the supply costs at issue were all "incremental" (although there is no finding to that effect in any of the decisions). IRS Br. at 56. But in Trinity Indus., Inc. v. United States, 691 F. Supp. 2d 688 (N.D. Tex. 2010), these so-called "incremental" supply costs were the costs of constructing two ships and a barge. The court in that case did not find that these construction costs were all "incremental," but instead held that the costs "are properly considered research expenditures in that the business component—the ship—could not have been developed without them." Id. at 697. Here, the business component – the experimental manufacturing process – could not have been developed without the supplies claimed by UCC.

The IRS's attempt to distinguish the Tax Court's decision in TG Missouri Corp. v. Commissioner, 133 T.C. 278 (2009), is particularly instructive. The IRS points out that "[t]he issue here, whether supplies were 'used in the conduct of qualified research' under I.R.C. § 41(b)(2)(A)(ii), was not squarely before the court in that case." IRS Br. at 57 n.12. But it was the IRS that made the decision not to place the issue before the

Tax Court in that case – which, of course, raises the question of whether the position the IRS advocates here is the carefully considered position of the agency or merely an argument being made by the agency's attorneys in an effort to prevail in this litigation. Compare Chase Bank USA, NA v. McCoy, 131 S. Ct. 871, 881 (2011) ("there is no reason to believe that the Board's interpretation is a '*post hoc* rationalization' taken as a litigation position") (citing Auer v. Robbins, supra).

VI. The IRS's Argument That The Supply Costs At Issue Are "Unreasonable Under The Circumstances" Is Legally Without Merit And Is Unsupported By The Record Below.

Citing IRC § 174(e), the IRS contends that the supply costs being claimed by UCC are "unreasonable under the circumstances." But, as the IRS's own regulations note, "the amount of an expenditure for research or experimental activities is reasonable if the amount would ordinarily be paid for like activities by like enterprises under like circumstances." Treas. Reg. § 1.174-2(a)(6). There is no evidence in the record below that another chemical company could have conducted the same plant-based research with fewer supplies, or purchased those supplies much more cheaply than did UCC.[10] To the contrary, the Tax Court found that the supplies were necessary

[10] Indeed, for some supply costs, UCC's costing expert (Ms. Hinojosa) used historical market values. Op. at 1235-36.

to conduct the research, and the IRS did not argue for the proposition or attempt to introduce evidence at trial that UCC overpaid for those supplies.

Rather, the IRS in its brief appears to make an argument regarding what is considered to be a "reasonable" amount that is entirely different from the test set forth in the applicable regulation. The IRS appears to be arguing that the cost of supplies used to manufacture a product, even if used in the conduct of qualified research, is unreasonable per se. But there is no case law, regulation or even IRS policy pronouncement that supports such a position. Moreover, the cases that have dealt with manufacturing supplies used to conduct qualified research have arrived at precisely the opposite conclusion. See, e.g., Trinity Indus., supra (allowing the cost of the supplies used to construct two prototype ships and a barge).

The IRS argues that the total amount of the claimed supply costs is unreasonable under the circumstances. But UCC's Tax Court Petition sought additional research credits for its plant-based qualified research in the amounts of approximately $3,656,091 in 1994 and $4,726,664 in 1995. Op. at 1212-14. For a major chemical company with net sales of $3.8 billion in 1994 [A259] and $4.6 billion in 1995 [A274], UCC's claim is hardly an example of taxpayer overreaching.

The IRS suggests in its brief that there is something untoward about the fact that UCC treated the costs of the research differently for financial accounting purposes than it did for tax purposes. But as the IRS is well aware, it has long been the rule that financial accounting treatment is not determinative of the appropriate tax treatment. This is particularly so where a tax incentive is involved. The credit at issue in this case, for example, does not even exist for financial accounting purposes. Since the early days of the income tax, it has been recognized that accounting rules, even if mandated by a regulator, are not binding for tax purposes. See, e.g., Old Colony R.R. Co. v. Commissioner, 284 U.S. 552, 562 (1932).

The IRS also argues in its brief that the IRC § 41 research credit should not be used to "subsidize" manufacturing operations. Effectively, this is no more than an argument that manufacturing plant-based research should not be eligible for the research credit. It is in the very nature of such research that the cost of supplies used to manufacture products will be "subsidized" to some extent. But that is precisely what Congress intended – to "subsidize" R&D in order to incentivize manufacturers to undertake more R&D. As the Brief of Amici Curiae notes (at 7-10, 14-18), plant-scale research is a critical type of research in many industries, and the failure to

include such research within the scope of IRC § 41 will stifle innovation and economic competitiveness.

Finally, in arguing that the claimed costs are "unreasonable under the circumstances," the IRS simply ignores the fact that the "consistency requirement" of IRC § 41(c)(4) requires that exactly the same types of supply costs must be included in UCC's base amount for purposes of computing the research credit. Op. at 1266 ("[I]f a taxpayer includes (or excludes) certain expenditures in determining its qualified research expenses for the current year, it must provide the same treatment for all such expenditures incurred during any year taken into account in computing the taxpayer's fixed base percentage * * *.") (quoting H. Rept. 101-247, at 1202-03 (1989)). In fact, a substantial portion of the underlying trial was devoted to the consistency requirement, and UCC undertook substantial efforts and expense to ensure that the same types of supply costs claimed for 1994 and 1995 were included in its base amount. See Op. at 1237-52.

VII. The IRS Misstates Both The Law And The Factual Record In Its Argument That The Sodium Borohydride Project Did Not Involve A "Process of Experimentation."

The sodium borohydride project involved a test of a compound to reduce the presence of a contaminant in UCC's crude butadiene product. Although the Tax Court found that the project was designed to and did eliminate uncertainties, it

nonetheless held that the project did not involve a "process of experimentation" because UCC did not conduct additional post-test analyses after it determined that the test was successful.[11]

In defending the Tax Court's holding, the IRS argues that the sodium borohydride project was a validation test and that validation testing does not involve a "process of experimentation." IRS Br. at 67, 69. But, as pointed out in UCC's principal brief, this view is simply wrong as a matter of law. The IRS has expressly stated that validation testing can constitute research under the Code. Specifically, in 1994, the IRS amended its § 174 Regulations to clarify that testing to determine whether the design of product or process is appropriate (i.e., "validation testing") can constitute R&D under IRC § 174. See T.D. 8562, 1994-2 C.B. 30, 31.[12] While these regulations were referenced in UCC's Brief (at 46-47, 65

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[11] The Tax Court's interpretation of the "process of experimentation" test plainly presents a legal issue. As noted in UCC's principal brief, to the extent the Tax Court's ruling that the sodium borohydride project did not involve a "process of experiment" is viewed as a mixed question of law and fact, this Court's recent decision in Robinson Knife, supra, suggests that de novo review is the correct standard under IRC § 7482(a)(1). UCC Br. at 30-31. In its brief, the IRS simply ignores Robinson Knife.

[12] The 1994 amendment clarified that validation testing is not a form of quality control testing, which is excluded by Treas. Reg. 1.174-2(a)(3)(i). UCC Br. at 46 n.11. Routine quality control testing is also excluded under IRC § 41(d)(4)(D)(v) and Treas. Reg. § 1.41-4(c)(5)(v).

n.21), the IRS simply ignores its own § 174 Regulations. Moreover, neither of the decisions cited by the IRS in its brief[13] supports the IRS's argument regarding validation testing in that neither case involved validation testing.

In addition, the IRS misstates the factual record in several important respects. First, the IRS argues that there is "no substance to [UCC's] assertion that the sodium borohydride project was capable of evaluating alternatives." IRS Br. at 68. In fact, the testing methodology employed by UCC was capable of evaluating other compounds (specifically, sodium bisulfate). Op. at 1220, 1261; A1397-98, Tr. 840-41. Moreover, as the Tax Court found, Dr. Manyik considered the use of an alternative compound (sodium bisulfate), but eliminated that alternative in favor of sodium borohydride because of advantages possessed by sodium borohydride. Op. at 1220, 1261; A1397-98, Tr. 840-41. The fact that there was no need to test other compounds does not mean that the testing methodology Dr. Manyik developed could not have been used for that purpose.

The IRS also asserts, without any citations to the record, that UCC "did not analyze any data beyond determining that an unspecified amount of sodium borohydride reduces acetaldehyde

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[13] Eustace v. Commissioner, 312 F.3d 905 (7th Cir. 2002); Norwest Corp. v. Commissioner, 110 T.C. 454 (1998).

with undetermined ancillary effects." IRS Br. at 68. This is incorrect. The amount of sodium borohydride to be used in the test, as well as the injection rate, was calculated by Dr. Manyik and included in his pre-test report. Op. at 1220; A399. The Facility/Operational Change Review ("FOCR") prepared for the test referenced the rate at which the sodium borohydride solution would be added to caustic scrubber. Op. at 1220; A349-52, A357-58. UCC's Environmental Pollution Department placed a specific limitation on the amount of sodium borohydride that could be used to conduct the test because of concerns involving the wastewater treatment system. Op. at 1220; A359. Numerous measurements were taken during the course of the test of the acid gases, the crude butadiene product, and the wastewater stream. Op. at 1221; A1435-37, Tr. 992-97. These measurements were then provided to an engineer to determine whether the test was successful. Op. at 1221; A1436-37, Tr. 996-97.

It is correct that UCC conducted no further testing after it determined that the sodium borohydride experiment had been successful. But, as explained in UCC's principal brief, the fact that no further tests were conducted after that point does not mean that a process of experimentation was not employed in performing that test. The legal question before this Court is whether, after a manufacturer has conducted manufacturing process research and determined that the process change being

researched works in an operating plant setting, is the manufacturer then obligated to conduct additional research in the operating plant setting simply to meet the "process of experimentation" standard. The Tax Court was wrong in concluding that such further research is required in order to obtain the research credit for the costs of the original research, and the arguments made by the IRS in support of the Tax Court's holding are legally and factually incorrect.

CONCLUSION

For the reasons set forth above and in its principal brief, UCC respectfully requests that this Court reverse the holdings of the Tax Court that the supplies UCC used to conduct the Amoco anticoking and UCAT-J projects were not "supplies used in the conduct of qualified research" within the meaning of IRC § 41(b)(2)(A)(ii), and that the sodium borohydride project did not constitute "qualified research" within the meaning of IRC § 41(d).[14]

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[14] The IRS contends that, if this Court rules in favor of UCC, it must remand with respect to certain extraordinary utility costs the IRS contested below and with regard to the question of whether the claimed supplies costs are "unreasonable" within the meaning of IRC § 174. IRS Br. at 36 n.9, 70 n.16. If the Court rules in UCC's favor, a remand will be necessary because the parties will have to submit new computations to the Tax Court under Rule 155 of the Tax Court's Rules of Practice and Procedure. The extraordinary utilities cost issue is a subsidiary issue

(continued…)

Respectfully submitted,

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(…continued)

involving the cost of certain fuel gases and refrigeration mix for the Amoco anticoking project that UCC believes most likely will be resolved in the Rule 155 computations process. The IRC § 174 "unreasonable" expenditures issue presents a question that both parties have briefed to this Court and for which no remand should be necessary.

UNITED STATES COURT OF APPEALS FOR THE SECOND CIRCUIT

Union Carbide Corporation v.

Commissioner of Internal Revenue

CERTIFICATE OF SERVICE
Docket Number: 11-2552

I, Harold J. Heltzer, hereby certify under penalty of perjury that on January 18, 2012, I served a copy of Reply Brief for the Appellant by

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