BEFORE THE TAX COMMISSION OF THE STATE OF IDAHO

In the Matter of the Protest of [redacted] Petitioner.	)	DOCKET NO. 0-077-816-832
	)	DECISION

[redacted] (Petitioner) protested the Notice of Deficiency Determination (Notice) dated February 7, 2024. Petitioner disagreed with the disallowance of the credit claimed for Idaho research activities (Idaho research credit). The Tax Commission reviewed the matter and hereby issues its final decision to uphold the Notice.

Background

Petitioner filed amended Idaho S Corporation Income Tax Returns for tax years 2019, 2020, and 2021 and an original Idaho S Corporation Income Tax Return for tax year 2022 claiming credit for Idaho research activities ($20,447; $17,913; $22,920; and $7,401 respectively). For tax years 2019 and 2020, Petitioner filed regular returns as an S Corporation. For tax years 2021 and 2022, Petitioner filed as an affected business entity. The Tax Commission's Income Tax Audit Bureau (Audit) selected these returns for examination and on November 3, 2023, sent Petitioner a letter requesting information and documentation to support the credits claimed.

On December 8, 2023, Audit received a Form ID-POA, Power of Attorney, naming [redacted] ([redacted]) as Petitioner's representative to the Tax Commission for the issues and years under review. [redacted] also provided several documents, including a copy of the engagement letter between Petitioner and [redacted] for a research tax credit study, a copy of the final report from said study, and other responses to specific questions included in Audit's initial letter.

On February 7, 2024, Audit issued the Notice to Petitioner, with a copy to [redacted] disallowing the credit for Idaho research activities in full for all four years. The Notice included information about qualifications for the credit, background information about Petitioner's business, and an analysis of Petitioner's activities relative to the credit's eligibility requirements. The Notice provided Petitioner with a set period to file a written request for redetermination (protest), which ended April 10, 2024.

On April 10, 2024, [redacted] submitted a letter protesting the Notice, explaining why Petitioner qualified to claim the credit, and requesting an informal hearing. Along with the letter, [redacted] provided documentation from several projects it undertook during the audit period to demonstrate Petitioner's eligibility. On April 19, 2024, Audit sent letters to [redacted] and Petitioner acknowledging the protest and informing them that the matter was being forwarded to the Tax Commission's Appeals unit (Appeals) to continue the redetermination process.

On May 21, 2024, Appeals sent [redacted] and Petitioner letters providing the available options for redetermining a protested Notice. Appeals spoke with [redacted] in June 2024 and scheduled an informal hearing for August 28, 2024.

The Tax Commission hosted the informal hearing in its Boise offices. Attendees included four representatives of the Tax Commission (Commissioner, Tax Appeals Specialist, Tax Appeals Manager, and Deputy Attorney General), three representatives from Petitioner in the office with another attending online, and two representatives from [redacted] Discussion centered around Petitioner's process for designing, developing, and manufacturing its products (roof and floor trusses, mainly for high-end homes and commercial buildings).

On December 23, 2024, Petitioners granted Appeals an extension to May 23, 2025, of the statute of limitations for the Tax Commission to issue a decision. On January 14, 2025, Appeals

sent [redacted] an email with follow-up questions requesting clarification of several items discussed during the informal hearing. [redacted] responded with answers and additional documentation on February 28, 2025.

Based on an analysis of applicable law and available information, the Tax Commission makes its final determination as follows.

Law & Analysis

Idaho Code section 63-3029G allows a nonrefundable credit for increasing research activities in Idaho. For purposes of the Idaho research credit, "qualified research expenses" means the same as defined in Internal Revenue Code (IRC) section 41, except that the research must be conducted in Idaho.

To be eligible for the credit, a taxpayer must show that it performed "qualified research" during the years at issue in accordance with IRC section 41(d). Research activity is "qualified research" under IRC section 41(d) only if it satisfies four separate tests[1].

First, the research expenses must be eligible for treatment as expenses under IRC section 174 (the section 174 test)[2]. Second, the research must be undertaken for the purpose of discovering information that is technological in nature (the discovering technological information test)[3]. Third, the application of the research must be intended to be useful in the development of a new or improved business component (the business component test)[4]. Fourth, substantially all the activities must constitute elements of a process of experimentation for a new or improved function,

[1] See *Union Carbide Corp. & Subsidiaries v. Comm'r*, 97 T.C.M. (CCH) 1207 (T.C. 2009), 2009 WL 605161, at *77, *aff'd*, 697 F.3d 104 (2d Cir. 2012).
[2] IRC section 41(d)(1)(A).
[3] IRC section 41(d)(1)(B)(i).
[4] IRC section 41(d)(1)(B)(ii).

performance, reliability or quality (the process of experimentation test)[5]. Each of these tests is discussed in more detail below. If the research fails any of these tests, it is not "qualified research" for the purposes of the research credit.

A research activity is specifically excluded from "qualified research" if the purpose of the research relates to style, taste, cosmetic, or seasonal design factors[6], if the research is conducted after the beginning of commercial production of the business component[7], or if the research is related to the adaptation of an existing business component to a particular customer's requirement or need[8].

Section 174 Test

IRC section 174[9] provides that a taxpayer may treat research or experimental expenditures paid or incurred during the taxable year in connection with its trade or business as expenses not chargeable to a capital account[10]. Treasury Regulation section 1.174-2(a)(1) defines the term "research or experimental expenditures" as used in section 174. It generally includes all such costs incident to the development or improvement of a product that "represent research and development costs in the experimental or laboratory sense." The qualified expenditure must be for activities intended to eliminate uncertainty in the development or improvement of a product. Treasury Regulation section 1.174-2(a)(1) states in part, "Uncertainty exists if the information available to the taxpayer does not establish the capability or method for developing or improving the product

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[5] IRC sections 41(d)(1)(C) and 41(d)(3).
[6] IRC section 41(d)(3)(B).
[7] IRC section 41(d)(4)(A).
[8] IRC section 41(d)(4)(B).
[9] IRC section 174: Prior to 2022, taxpayers could immediately expense Research and Development (R&D) expenditures under IRC section 174. For the tax years beginning on and after January 1, 2022, the Tax Cuts and Jobs Act (passed in 2017, signed into law and came into effect in 2022) requires R&D expenditures to be amortized over five years for domestic R&D expenditures.
[10] IRC section 174(a)(1).

or the appropriate design of the product." However, "because the taxpayer need only be uncertain as to 'the capability *or* method o*r* the appropriate design' of the improvement, an uncertainty may exist even if the taxpayer knows that it is technically possible to achieve a goal but is uncertain of the method or appropriate design to use to reach that goal."[11] Treasury Regulation section 1.174-2(a)(1) also states, "Whether expenditures qualify as research or experimental expenditures depends on the nature of the activity to which the expenditures relate, not the nature of the product or improvement being developed or the level of technological advancement the product or improvement represents."

Discovering Technological Information Test

To satisfy the technological in nature requirement for qualified research, the process of experimentation used to discover information must fundamentally rely on principles of the physical or biological sciences, engineering, or computer science. A taxpayer may employ existing technologies and may rely on existing principles of the physical or biological sciences, engineering, or computer science to satisfy this requirement. The information sought does not have to be groundbreaking or expand the volume of knowledge available in the field of scientific study.

Business Component Test

A taxpayer must intend to apply the information being discovered to develop a new or improved business component of the taxpayer. A business component is any product, process, computer software, technique, formula, or invention, which is to be held for sale, lease, license, or used in a trade or business of the taxpayer. Each business component of the taxpayer must satisfy all 4 tests[12]. Treasury Regulation section 1.174-2(a)(5) explains that, even if a business component

[11] *Union Carbide Corp. & Subs. v. Commissioner*, TC Memo 2009-50 (2009).
[12] IRC section 41(d)(2)

as a whole fails any of the four tests, a taxpayer may still satisfy the tests "at the level of the component or subcomponent of the product."

Process of Experimentation Test

To overcome uncertainties, a taxpayer should use a systematic inquiry as part of the process of experimentation. To be a true process of experimentation, the project must use the scientific method. This means "the project must involve a methodical plan involving a series of trials to test a hypothesis, analyze the data, refine the hypothesis, and retest the hypothesis so that it constitutes experimentation in the scientific sense.[13]"

Treasury Regulation section 1.41-4(a)(6) states in part,

> In order for activities to constitute qualified research under section 41(d)(1), substantially all of the activities must constitute elements of a process of experimentation that relates to a qualified purpose. The substantially all requirement … is satisfied only if 80 percent or more of a taxpayer's research activities, measured on a cost or other consistently applied reasonable basis (and without regard to section 1.41-2(d)(2)), constitute elements of a process of experimentation for a purpose described in section 41(d)(3).

Recall that IRC section 41(d)(3) defines qualified research as that relating to a new or improved function, performance, reliability, or quality and specifically excludes research related to style, taste, cosmetic, or seasonal design factors.

Treasury Regulation section 1.41-4(a)(6) also requires that the "substantially all" test – a subtest to the process of experimentation test – be applied to *activities*, not *physical elements of the business component being developed or improved* since the extent of experimentation would not vary in proportion to the size of each element. For example, determining the design of smaller

[13] *Union Carbide Corp. & Subs. v. Commissioner*, T.C. Memo 2009-50 (2009).

and more complex elements might require more experimentation than determining the design of larger but simpler elements.

The "substantially all" test is both a qualitative and quantitative test. Not only must the activities be of the proper type, but 80 percent of those activities must constitute a process of experimentation for an allowable purpose. In *Little Sandy*[14], the 7th Circuit Court of Appeals determined that the correct fraction for determining whether the 80 percent mark is achieved in the process of experimentation test is "research activities that constitute elements of a process of experimentation divided by research activities not excluded under [IRC] section 41(d)(4) and whose expenses are deductible under Section 174." Treasury Regulation section 1.41-4(a)(6) states that the activities must be "measured on a cost or other consistently applied reasonable basis (and without regard to section 1.41-2(d)(2))."

Application to [redacted]

In the Notice, Audit presented an analysis of the four-part test in reference to Petitioner and determined that Petitioner failed all four tests. According to Audit's analysis:

- Petitioner did not prove specific uncertainty in the design and manufacturing processes.
- Petitioner adapted existing business components to meet the needs of particular customers.
- Petitioner did not incur research costs in the experimental or laboratory sense.
- Petitioner did not meet the technological information test because using computer-aided modeling and simulations is not qualified research to eliminate technical uncertainty.
- The documentation Petitioner provided does not show that a process of experimentation was undertaken; simply narrating the steps of the process does not establish that Petitioner engaged in testing a hypothesis so that it constitutes experimentation in the scientific sense.

[14] *Little Sandy Coal Co. Inc. v. Commissioner*, 131 AFTR 2d 2023-955 (62 F.4th 287)

Audit concluded that Petitioner did not qualify for the research credit for these reasons:

- Making drawings, changing drawings, loading them into software is not research. This is the day-to-day work to design trusses.
- Designing and engineering trusses to customer specifications does not qualify as research.
- Adapting an existing building component is not research.
- Using CAD software does not satisfy the requirement of using computer science.
- Estimates are not allowed to determine the research credit.
- No new information was discovered. The overall process of designing a truss is the same.
- Research conducted outside of Idaho does not qualify.

The Tax Commission is unsure why Audit mentioned research conducted outside Idaho in the Notice. The Tax Commission is unable to find that Petitioner claimed any such research in regard to the Idaho credit.

There are some aspects of Audit's conclusions that the Tax Commission agrees with and some with which it does not. For example, while making drawings and loading them into software are not necessarily research activities by themselves, they could be elements of a research process created to eliminate uncertainty in a product design if they coincide with other activities.

Designing and engineering trusses to customer specifications does not automatically qualify as research simply because of the novelty or newness of the products and the fact that the design of the product is unknown at the start. The activities in the designing and engineering process must qualify and pass all four tests.

The Tax Commission agrees that adapting an existing building component is not qualifying research. Petitioner's "adapting an existing building component" is likely limited but not completely absent. For example, if Petitioner had a series of trusses in a row that will be subject to the same requirements, there is potential that research is taking place to develop the first of these trusses. Subsequent designs with minor "tweaks" would be adaptations of the first one.

The Tax Commission agrees with Audit's conclusion that using software does not automatically qualify as seeking technological information. However, using software in conjunction with some other hard science could be qualifying activity.

Estimates are allowed in calculating the research tax credit, but only after it has been established that the taxpayer qualifies for the credit. According to the 7th Circuit Court of Appeals in *Little Sandy* (2023):

> If a taxpayer can establish that qualified research occurred, we may estimate the qualified research expenses subject to the tax credit. See McFerrin, 570 F.3d at 679 (citing *Cohan v. Comm'r*, 39 F.2d 540, 544 [8 AFTR 10552] (2d Cir. 1930)). But this estimate relates to Section 41(b), which is a separate—albeit related—inquiry from Section 41(d). Only after a taxpayer establishes that qualified research has occurred under Section 41(d) may we estimate, if needed, the amount of qualified research expenses under Section 41(b). *Shami v. Comm'r*, 741 F.3d 560, 568 [113 AFTR 2d 2014-671] (5th Cir. 2014) ("[T]he Cohan rule is not implicated unless the taxpayer proves that he is entitled to some amount of tax benefit.").

It is to this last point the discussion must turn in this case. The overarching question is whether Petitioner is eligible to claim the research tax credit.

During the informal hearing, one of Petitioner's lead designers was present and explained their development process. Basically, someone from the business meets with the client to acquire basic project information (e.g., site conditions, general requirements, unique architectural features, etc.). This information is used with architectural drawings to create preliminary structural drawings to show where trusses will need to be placed, etc. The process continues with repeated consultations with the client to fine tune requests and requirements. When enough information is gathered, preliminary design of the individual trusses within a project begins. Designers will use software programs to model the trusses and test them against preset standards to ensure strength, integrity, and ability to meet code requirements for load bearing and flex, among other things. This will often take multiple rounds as well. When a truss design fails a given test, certain aspects are

changed until a suitable solution is found. After finalizing the design of all the trusses in the project and getting them approved by an engineer, manufacturing takes place. During this process, the fabrication team compares the pieces to a laser to ensure the pieces are cut and assembled properly. If it is not correct, the truss is discarded and recut to ensure it follows the approved design.

Following the hearing, the Tax Commission requested additional information from Petitioner. Specifically, Petitioner was asked to identify the discrete business components that were the subject of the research which the credit is claimed for. The response was that Petitioner develops "new truss product." In the Final Report from [redacted] on the research credit, it was noted:

> [Petitioner] did not employ a project-by-project approach when determining which of its business activities met the definition of "qualified research" under § 41(d) because the research tax credit is an activities-based credit. [Petitioner] did not claim individual projects as individual "business components." Rather, the named business component groupings are used to identify a segment of business activities for which wage, supply, and contract research expenses are paid or incurred to enable [Petitioner] to develop new or improved products. Individual projects within each broader activity grouping are highlighted to demonstrate the types of activities that occur within the overall activity grouping.

As noted earlier, the four-part test must be applied to each business component subject to research and development. Petitioner provided documentation regarding several sample projects to demonstrate the custom nature of the projects and the iterative design process. By stating that the business component is "new truss product" and not specifying any particular project or trusses, the Tax Commission must assume that Petitioner is claiming to have conducted qualifying research on all new trusses developed and built during the years in question.

One of the four tests requires that substantially all (at least 80%) of the research activities must constitute elements of a process of experimentation relating to a qualified purpose. In the Final Report, [redacted] states that it divided activities into categories of "qualifying" and "non-qualifying," but provides little clarification of exactly what those activities are. When asked "What

and how did you measure to determine that substantially all the development activities included in 'design development and engineering' were qualifying activities," [redacted] replied that Petitioner did not use a project-by-project or departmental approach, but rather "used a 'consistently applied reasonable basis' that involved collecting and evaluating financial data, contemporaneous documentation, and testimony from multiple employees to evaluate whether Taxpayer performed investigative research activities eligible for the § 41 research tax credit." This response describes the process that [redacted] employed but does not answer the question of what criteria were used to determine that enough of the activities qualify. The Tax Commission is essentially being asked to take it on faith that [redacted] determination of which activities qualify, and which do not is accurate and that at least 80% of those activities are part of a process of experimentation for a qualifying purpose.

[redacted] has correctly claimed that IRC section 41 does not contain any specific recordkeeping requirement for the research credit. Instead, taxpayers are subject to the recordkeeping requirement contained in Treasury Regulation section 1.41-4(d), which states that a taxpayer must "maintain records in sufficiently usable form and detail to substantiate" eligibility for the credit. The Tax Commission finds that the information provided during the audit and the administrative review process does not contain sufficient detail to establish that at least 80% of the activities labeled as "design development and engineering" are elements of a process of experimentation related to a qualified purpose for all trusses developed and manufactured during the years in question. Therefore, Petitioner has not met all four tests and is not entitled to any research tax credit.

As the 7th Circuit Court of Appeals wrote, "… shortcut estimates of experimentation-related activities will not suffice. Something more, such as documentation of time spent on such

activities, is necessary," and "The lesson for taxpayers seeking to avail themselves of the research tax credit is to adequately document that substantially all of such activities were research activities that constitute elements of a process of experimentation. Generalized descriptions of uncertainty, assertions of novelty, and arbitrary estimates of time performing experimentation are not enough."[15]

The Bureau added interest and penalty to Petitioner's tax deficiency. The Tax Commission reviewed those additions and finds them to be appropriate and in accordance with Idaho Code sections 63-3045 and 63-3046, respectively.

Conclusion

The Tax Commission has determined that Petitioner has not provided sufficient documentation to meet the four-part test. Petitioner is not eligible to claim the research tax credit. For tax years 2019 and 2020, the additional tax due and any related penalty and interest will be assessed on the business owners' individual returns.

THEREFORE, the Notice dated February 7, 2024, is hereby UPHELD and MADE FINAL.

IT IS ORDERED that Petitioner pay the following tax, penalty, and interest:

YEAR	TAX	PENALTY	INTEREST	TOTAL
2019	$0	$0	$0	$0
2020	0	0	0	0
2021	22,920	325	563	23,808
2022	7,401	0	373	7,774
			Held refund	(16,426)
				$15,156

The Tax Commission DEMANDS immediate payment of this amount. Interest is calculated in accordance with Idaho Code section 63-3045.

[15] *Little Sandy Coal Co. Inc. v. Commissioner*, 131 AFTR 2d 2023-955 (62 F.4th 287)

An explanation of Petitioner's right to appeal this decision is enclosed.

DATED this _____ day of _____ 2025.

IDAHO STATE TAX COMMISSION

CERTIFICATE OF SERVICE

I hereby certify that on this _____ day of _____ 2025, a copy of the within and foregoing DECISION was served by sending the same by United States mail, postage prepaid, in an envelope addressed to:

Receipt No.

[redacted] _____

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[redacted]