

years 2021 through 2023⁴ to examine the Idaho research credit. The Bureau requested the S-Corp respond to specific questions regarding its research activities and provide a copy of the study conducted by the third party. The Bureau reviewed the study and determined that the S-Corp's activities did not satisfy all the requirements. Therefore, the Bureau disallowed the Idaho research credit claimed by the S-Corp. The S-Corp also claimed the Idaho investment tax credit (ITC), and the Bureau disallowed it as it was claimed for assets Petitioner expensed under IRC section 179. The Bureau made these adjustments and issued a Notice to the S-Corp. Because the S-Corp adjustments flow through to Petitioners' individual income tax return, the Bureau adjusted the flow-through credits claimed on Petitioners' individual income tax returns for the tax years shown in the Notice. The S-Corp did not protest; however, Petitioners did. In the protest, Petitioner's representative disagreed with the Bureau's flow-through credit adjustment specifically to the Idaho research credit⁵. The Bureau acknowledged the protest and referred the matter to the Tax Commission's Appeals Unit (Appeals) for administrative review.

Appeals sent Petitioners a letter explaining the options available for redetermining a Notice. The representative responded and requested an informal hearing, which was held June 23, 2025. Having reviewed the matter, the Tax Commission hereby issues its final decision.

ISSUE

The issue on appeal is the Idaho research credit claimed by Petitioners. Since the credit was passed through from the S-Corp, the Tax Commission reviews whether the S-Corp's activities have met the requirements for the Idaho research credit pursuant to Idaho Code section 63-3029G.

⁴ For tax year 2023, the S-Corp claimed the Idaho research credit on its original return.

⁵ The representative did not protest ITC; therefore, the Tax Commission will not address it any further in this decision.

LAW AND 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 all the four (4) tests. 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).

First, the research expenses must be eligible for treatment as expenses under IRC section 174 (the section 174 test)⁶. Second, the research must be undertaken for the purpose of discovering information that is technological in nature (the discovering technological information test)⁷. 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)⁸. Fourth, substantially all the activities constitute elements of a process of experimentation for a new or improved function⁹, performance, or reliability or quality (the process of experimentation test)¹⁰. If the research fails any of these tests, it is not qualified research for the purposes of the research credit.

⁶ IRC section 41(d)(1)(A).

⁷ IRC section 41(d)(1)(B)(i).

⁸ IRC section 41(d)(1)(B)(ii).

⁹ Merriam-Webster defines "function" as "the action for which a person or thing is specifically fitted or used or for which a thing exists (purpose)."

¹⁰ IRC sections 41(d)(1)(C) and 41(d)(3).

A research activity is not “qualified research” if the purpose of the research relates to style, taste, cosmetic, or seasonal design factors¹¹. Further, the activities specifically excluded from “qualified research” are the research conducted after the beginning of commercial production of the business component¹², and the research related to the adaptation of an existing business component to a particular customer’s requirement or need¹³.

Section 174 Test

IRC section 174¹⁴ 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 account¹⁵. Treasury Regulation section 1.174-2(a)(1) defines the term “research or experimental expenditures” as used in section 174, generally includes all such costs incident to the development or improvement of a product and would “... 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 or the appropriate design of the product.” *Max v. Commissioner of Internal Revenue*, T.C. Memo. 2021-37 (2021). However, “because the taxpayer need only be uncertain as to ‘the capability *or* method... *or* the appropriate design of the

¹¹ IRC section 41(d)(3)(B).

¹² IRC section 41(d)(4)(A).

¹³ IRC section 41(d)(4)(B).

¹⁴ 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.

¹⁵ IRC section 174(a)(1).

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.”¹⁶ 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 science¹⁷. 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.

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 sales, lease, license, or used in a trade or business of taxpayer, and each “business component” of the taxpayer must satisfy all 4 tests.

Process of Experimentation Test

To overcome uncertainties, a taxpayer should use a systemic inquiry as part of the process of experimentation; a requirement of qualified research under IRC section 41(d)(1)(C). Treasury

¹⁶ Treas. Reg. section 1.174-2(a)(1).

¹⁷ Computer science is the study of computers and algorithmic processes, including their principles, their hardware and software designs, their applications, and their impact on society.

Regulation section 1.41-4(a)(5)(i) explains that a process of experimentation is “a process designed to evaluate one or more alternatives to achieve a result where the capability or the method of achieving that result, or the appropriate design of that result, is uncertain as of the beginning of the taxpayer's research activities.” 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.” *Union Carbide Corp. & Subs. v. Commissioner*, T.C. Memo. 2009-50 (2009).

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 of IRC section 41 (d)(1)(c) is applied separately to each business component and satisfied only if eighty percent (80%) or more of a taxpayer’s research activities has constituted elements of a process of experimentation for a purpose described in IRC section 41(d)(3). Treasury Regulation section 1.41-4(a)(6) also requires that the substantially all 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 and more complex elements might require more experimentation than determining the design of larger but simpler elements.

In the present case, the S-Corp identified significant inefficiencies in the traditional mulching and fire reduction methods. To improve the process, the S-Corp developed the [REDACTED] Handcrew Technique (Handcrew technique) by integrating the existing operations of hand crews and machinery through three stages: Stage 1 in 2021, Stage 2 in 2022, and Stage 3 in 2023.

The first step of the process was to integrate two separate operations, hand crews and machinery (Stage 1 in 2021). However, the Stage 1 did not bring the results that the S-Corp had hoped for. The S-Corp attempted to improve the Handcrew technique by training its subcontractors who provided hand crew service and coordinating their work with its machinery operators (Stage 2 in 2022). Later, the S-Corp realized that it needed to have its own hand crew team, instead of depending on its subcontractors. Therefore, the S-Corp built its own hand crew team and added new equipment (Stage 3 in 2023).

Throughout these three stages described above, the S-Corp encountered the following uncertainties at the outset as to:

- Whether the Handcrew techniques would improve the mulching process,
- The S-Corp's ability to economically implement the Handcrew technique, and
- A ratio of hand crew and machinery to use in the Handcrew technique for the best environmental and economical results.

The Handcrew technique is an integration of two existing operations: one is hand crew operation and the other is machinery operation, and both operations separately existed before the S-Corp combined them into one. Based on the S-Corp's past experiences in using both operations, the S-Corp would have known, at the outset of the integration, that it is technically possible to use hand crews and machinery together on the same site but was uncertain about the most effective ratio of hand crews and machinery to use to reach its goal.

Section 174 is intended to limit deductions to "expenditures of an investigative nature expensed in developing the concept of a model or product", as opposed to the construction or manufacture of the product itself¹⁸. During the hearing, the representative clarified that there was

¹⁸ *Little Sandy Coal Co. v. Commissioner*, 62 F.4th 287 (7th Cir. 2023), Court Opinion (03/07/2023)

no period of time when the S-Corp dedicated its time and effort only for research and development of the Handcrew technique prior to the initial implementation of the technique. The initial implementation of the Handcrew technique and all the experimentations occurred during the “revenue generating projects” which the S-Corp conducted on its customer’s site. The representative explained that the “revenue generating projects” are the “job orders” from the S-Corp’s customers.

The timeline for completing a job order is, first, a potential customer submits his or her order to the S-Corp, and then the S-Corp conducts a field survey, i.e., visiting the customer site, interacting with the environment, collecting observations, etc., in a small area selected for testing on the customer’s site. The representative clarified that the S-Corp does not own a testing site, and all the testing happened on its customers’ sites where the S-Corp generated revenues by providing its mulching and tree trimming services. Based on the S-Corp’s test results on its customer’s site, if it finds the job is economically feasible, it provides an estimate to the customer. Once the customer accepts the estimate, the S-Corp conducts its mulching and tree trimming services, utilizing the Handcrew technique. The S-Corp observes the work conducted on its customer’s site, compares the number of tree-scarring by year, and analyzes whether the Handcrew technique effectively reduced the tree-scarring.

To develop and improve the Handcrew technique, the S-Corp tried out different techniques, i.e., different crew size, different tool combinations, changes in the machine-to-hand crew ratio, for each job ordered by its customers. The representative explained in the protest that the S-Corp’s research activities included “data collection on ground disturbance and tree damage, documentation of results through photos, employee observations, and client feedback.” The representative explained that the S-Corp relied on principles of the earth science to study

environmental impact and ground disturbance while it used principles of the biological science to analyze tree health and ecosystem effects, and the physical science to understand and consider machinery impacts and soil compaction.

During the hearing, Appeals requested the representative provide substantiation for the “job orders” for the “revenue generating projects”. The representative provided the invoices the S-Corp issued to its customers and intended to substantiate the “job orders” based on its receipts of payments for the services rendered by using the Handcrew technique. The invoices contained name of the S-Corp’s customer and site location but did not describe any project details, i.e., project descriptions, project plan, employee time tracking records, technical documentations (e.g., specifications and records that guide the application and maintenance of mulches in a specific area), etc. "To satisfy the process of experimentation test, a taxpayer should develop a hypothesis as to how a new alternative might be used to develop a business component, test that hypothesis in a scientific manner, analyze the results of the test, and then either refine the hypothesis or discard it and develop a new hypothesis and repeat the previous steps." *Union Carbide*, T.C. Memo. 2009-50, at *81. The representative clarified that there is no written manual for the Handcrew technique, nor is there substantiation of the “systematic observations”, “systematic experimentations”, “systematic field testing and evaluations” for the years under review. Giving Petitioner the benefit of the doubt, the S-Corp might have collected the results of its experimentations, analyzed them and used its analysis to improve the technique. However, there is no substantiation of any experimentations at any stages, i.e., observation, question formulation, hypothesis development, experimental design, data collection and analysis, and conclusion formulation. Without any substantiation, it is impossible to determine whether the S-Corp relied on earth science, and whether the S-Corp made a methodical plan involving a series of trials to test a hypothesis, analyze

the data, refine the hypothesis, and retest the hypothesis. Additionally, to meet the requirements under IRC section 41(d)(3)(A), “substantially all of the activities... constitute elements of a process of experimentation.”, which means that at least eighty percent (80%) or more of a taxpayer’s research activities must involve a process of experimentation, i.e., identifying uncertainty, evaluating alternatives to achieve an uncertain outcome using scientific principles, testing methods, etc. Treasury Regulation section 1.41-4(a)(6) provides an arithmetic test for determining whether "substantially all" of a taxpayer's research activities regarding a business component would meet involve a process of experimentation. According to the regulations:

The substantially all requirement of section 41(d)(1) (C)... is satisfied only if 80 percent or more of a taxpayer's research activities, measured on a cost or other consistently applied reasonable basis..., constitute elements of a process of experimentation for a purpose described in section 41(d) (3). Accordingly, if 80 percent (or more) of a taxpayer's research activities with respect to a business component constitute elements of a process of experimentation for a purpose described in section 41(d) (3), the substantially all requirement is satisfied even if the remaining 20 percent (or less) of a taxpayer's research activities with respect to the business component do not constitute elements of a process of experimentation for a purpose described in section 41(d) (3), so long as these remaining research activities satisfy the requirements of section 41(d)(1) (A) and are not otherwise excluded under section 41(d)(4). **The substantially all requirement is applied separately to each business component.**” (emphasis added)

To determine whether Petitioner meets the substantially all test, the Tax Commission reviewed the research expenses claimed by Petitioner. The representative explained in the protest that the wages and cost of supplies the S-Corp claimed as qualified research expenses (OREs) were its expenditures for the “revenue generating projects”. For the wages, the S-Corp did not use any time tracking system for the years under review. Instead, the S-Corp estimated the wages for the employees who spent their time utilizing only the Handcrew technique based on the S-Corp’s owner’s evaluations of his oral interviews with employees. The S-Corp identified employees by

role/title and calculated the percentage of the employee's time devoted for research activities to his or her total work hours.

IRC section 6001 requires a taxpayer to keep records in compliance with the IRC and Treasury Regulations. Treasury Regulation section 1.6001-1(a) requires a taxpayer to "keep such permanent books of account or records . . . as are sufficient to establish the amount of gross income, deductions, credits, or other matters required to be shown" on a tax return. Treasury Regulation section 1.41-4(d) provides that a taxpayer specifically "must retain records in sufficiently usable form and detail to substantiate that the expenditures claimed are eligible for the credit.", but it does not require substantiation of research credit claim to be in any particular types of documents.

The Tax Court addressed the substantiation burden that taxpayers, claiming the research credit, must bear. *Little Sandy Coal Co. v. Commissioner*, 62 F.4th 287, 308 (7th Cir. 2023), aff'g T.C. Memo. 2021-15. In *Little Sandy Coal Co.*, the taxpayer relied on trial testimony as substantiation for its estimated research expenses and asked the Tax Court to take it on faith that the allocations of its employees' wages were only for activities constituting qualified research. The Tax Court determined that the taxpayer had failed to show entitlement to the credit and emphasized that "shortcut estimates of experimentation-related activities will not suffice... Something more, such as documentation of time spent on such activities, is necessary."

To review whether the S-Corp's estimates are reasonable, Appeals requested the representative provide a written list of the interview questions asked by the S-Corp's owner and the responses received from the S-Corp's employees. The representative explained that "the interviews were strictly oral and not written." The S-Corp's owner did not utilize a questionnaire in determining the payroll % but rather engaged in a series of conversational inquiries to establish connections between the employees and the research activities. The representative provided an

explanation of how the S-Corp's owner evaluated those oral interviews. However, the representative has yet to explain the method, i.e., a systematic or established form of procedure, used by the S-Corp's owner to estimate the percentage of the wages attributable to research activities relying solely on the S-Corp's owner's evaluation of his conversational inquiries. The Tax Commission found that the S-Corp did not establish the legitimacy of the payroll % and therefore determined that the wages claimed by the S-Corp are not qualified research expenses.

As for the total cost of supplies for tax year 2021, it appears that the S-Corp inadvertently used the amount paid to its independent contractor. For tax years 2022 and 2023, it is not clear how the S-Corp calculated the cost of supplies as the amount claimed on its Idaho Form 67 does not match any amount reported on its federal Form 1120S. Additionally, although the representative explained that the S-Corp hired contractors in 2021 and 2022, the S-Corp's Idaho Form 67 reported no contract research expenses¹⁹. Appeals requested the representative reconcile these expenses claimed on the S-Corp's Idaho Form 67 and its federal Form 1120S; however, this information has yet to be provided. With no detail of the S-Corp's calculation, it is impossible to determine whether the expenses claimed by the S-Corp are accurate. The Tax Commission found the amount of the expenses claimed by the S-Corp is not reliable and therefore determined that the cost of supplies and contract research expenses, if any claimed by the S-Corp, are not qualified research expenses.

The representative argued that the S-Corp's "revenue generating projects" qualify for the Idaho research credit. However, the Tax Commission found that the wages and supply expenses (and contract research expenses if any claimed) would have been incurred regardless of any

¹⁹ The allowable contract research expenses are limited at sixty five percent (65%) of total amount if paid or incurred for qualified research conducted in Idaho that was performed on its behalf.

qualified research activities. The Tax Commission determined that the S-Corp is not entitled to the Idaho research credit and therefore upholds the Bureau's adjustment.

CONCLUSION

The Tax Commission found that the S-Corp's activities to develop and improve the [REDACTED] Handcrew Technique are not qualified research as its activities met none of the requirements under IRC section 41. The Tax Commission found that the Bureau properly disallowed the Idaho research credit claimed by the S-Corp. The additional tax the S-Corp owned flows through its shareholders. The Tax Commission found that the flowthrough adjustments the Bureau made to Petitioner's Idaho returns are correct. The Bureau added interest and penalties to Petitioners' Idaho tax due. The Tax Commission reviewed the additions and found them appropriate and in accordance with Idaho Code sections 63-3045 and 63-3046.

THEREFORE, the Tax Commission AFFIRMS the Notice dated September 24, 2024, directed to Petitioners.

IT IS ORDERED that Petitioners pay the following tax and interest:

<u>YEAR</u>	<u>TAX</u>	<u>PENALTY</u>	<u>INTEREST</u>	<u>TOTAL</u>
2021	\$6,941	\$0	(233)	\$6,708
2022	3,706	55	73	3,834
2023	8,426	328	86	8,840
			Less Held Refund	(13,265)
			Total Due	<u>\$6,117</u>

DEMAND for immediate payment of the foregoing amount is hereby made and given.

An explanation of Petitioners' 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]

[REDACTED]