

**Letter of Findings: 01-20150243 (Redacted)**  
**Individual Income Tax**  
**For the Years 2011 and 2012**

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**HOLDING**

Indiana Ethanol Producer failed to provide specific evidence sufficient to warrant an adjustment of the Department's evaluation of the extent to which Ethanol Producer was entitled to claim research expense credits. The audit's application of the "shrink back" rule to expenses attributable to Ethanol Producer's fermentation projects was justified by the documentation made available during the audit and during the administrative hearing.

**ISSUE**

**I. Corporate Income Tax - Qualified Research Expense Credits.**

**Authority:** IC § 6-3-2-1(b); IC § 6-3-1-3.5(b); IC § 6-3.1-4-2; IC § 6-3.1-4-2(a); IC § 6-3.1-4-4; IC § 6-8.1-5-1(c); IC § 6-8.1-5-4(a); Indiana Dep't of State Revenue v. Rent-A-Center East, Inc., 963 N.E.2d 463 (Ind. 2012); Conklin v. Town of Cambridge City, 58 Ind. 130 (1877); Wendt LLP v. Indiana Dep't of State Revenue, 977 N.E.2d 480 (Ind. Tax Ct. 2012); Scopelite v. Indiana Dep't of Local Gov't Fin., 939 N.E.2d 1138 (Ind. Tax Ct. 2010); Lafayette Square Amoco, Inc. v. Indiana Dep't of State Revenue, 867 N.E.2d 289 (Ind. Tax Ct. 2007); General Motors Corp. v. Indiana Dept. of State Revenue, 578 N.E.2d 399 (Ind. Tax Ct. 1991); Indiana Dep't. of State Revenue, Sales Tax Division v. RCA Corp., 310 N.E.2d 96 (Ind. Ct. App. 1974); United States v. McFerrin, 570 F.3d 672 (5th Cir. 2009); Stinson Estate v. United States, 214 F.3d 846 (7th Cir. 2000); I.R.C. § 41(b); I.R.C. § 41(b)(1); I.R.C. § 41(b)(2)(B); I.R.C. § 41(b)(2)(C); I.R.C. § 41(b)(2)(D); I.R.C. § 41(b)(3); I.R.C. § 40(b)(4)(A); I.R.C. § (b)(5); I.R.C. § 41(d); I.R.C. § 41(d)(1)(B); I.R.C. § 41(d)(1)(C); I.R.C. § 41(d)(2)(C); I.R.C. § 41(d)(3)(A); I.R.C. § 41(d)(4); I.R.C. § 41(d)(4)(A); I.R.C. § 41(d)(4)(D); I.R.C. § 41(d)(4)(E); I.R.C. § 41(e)(2); Treas. Reg. § 1.41-2; Treas. Reg. § 1.41-4(c)(2); Treas. Reg. § 1.41-2(e); Treas. Reg. § 1.41-4(a)(5)(i); Audit Techniques Guide: Credit for Increasing Research Activities (i.e. Research Tax Credit) IRC § 41 - Substantiation and Recordkeeping; H.R. REP. NO. 99-841 (1986).

Taxpayer argues that the Department erred when it disallowed certain Research Expense Credits claimed on Taxpayer's 2011 and 2012 corporate income tax returns.

**STATEMENT OF FACTS**

Taxpayer is an Indiana limited liability company in the business of producing ethanol. Taxpayer elected to file its income tax returns as a partnership.

For 2011 and 2012, Taxpayer filed composite Indiana partnership returns reporting its taxable income and calculating the tax due from non-resident, individual partners.

For 2011, due to the research expense credit calculated and claimed by Taxpayer, the partners' distributive share of the credit exceeded the tax due from the nonresident partners.

For 2012, the partnership sustained a loss; therefore no nonresident partner withholding was required.

The Indiana Department of Revenue ("Department") conducted an audit review of Taxpayer's income tax returns. The audit made adjustments to the claimed Research Expense Credits ("REC") (Alternatively "Qualified Research Expenses" ("QREs")) which resulted in additional tax due on the 2011 composite partnership returns.

The Department's disallowance of the RECs (QREs) for each of the tax years resulted in a proposed increase in tax (or a proposed decrease in its taxable loss) for 2011 and 2012 and as reflected on the partners' returns.

The Department issued an audit report to Taxpayer and each of the partners in which the partners' respective distributive shares of Taxpayer's income (or loss) for 2011 and 2012 was adjusted based on the disallowance of the Taxpayer's RECs.

The Department issued proposed assessments to the partners as well as to Taxpayer for withholding tax.

Taxpayer and its partners disagreed with the proposed assessments and submitted various protests to that effect. An administrative hearing was conducted during which Taxpayer and its partners' representative explained the basis for the protest. This Letter of Findings results.

For purposes of this Letter of Findings, "Taxpayer" refers to the Indiana ethanol producer. However, the decisions in this Letter of Findings - to the extent of the disputed RECs - are dispositive of the protests submitted by both Taxpayer and its partners.

## **I. Corporate Income Tax - Research Expense Credits.**

### **DISCUSSION**

Taxpayer maintains that the Department's audit improperly excluded supply, contract, and wage costs as Qualified Research Expenses ("QREs") and that the audit's conclusions are "incorrect as a matter of law."

#### **A. Audit Results.**

The Department reviewed Taxpayer's calculation of QREs attributable to research activities conducted during 2011 and 2012. Taxpayer based its claimed credit on QREs attributable to research and development in the manufacture of Taxpayer's ethanol product.

The audit summary report sets out what it interprets as the Indiana standard for claiming qualified QREs. As explained in the audit report:

The Indiana research expense credit is allowed pursuant to Indiana Code 6-3.1-4 and is based on Section 41 of the Internal Revenue Code and regulations in effect on January 1, 2001. IRC section 41(d) defines qualified research as:

1. Expenditures that may be treated as expenses under IRC section 174 (Research and Experimental expenditures),
2. Discovering information that is technological in nature,
3. Intending to use this information to develop a new or improved business component, and
4. Substantially all the activities of which constitute elements of a process of experimentation.

A business component is defined as any product, process, computer software, technique, formula or invention which is to be held for sale, lease or license, or used by the taxpayer in a trade or business of the taxpayer. Also, any plant process, machinery, or technique for commercial production of a business component shall be treated as a separate business component (and not as part of the business component being produced). (Emphasis added).

The audit found that certain of Taxpayer's research projects "did not meet the requirements of qualified research for various reasons" based on the descriptions of the projects "and information included on the [T]axpayer supplied QRE Credit worksheets." Nonetheless, for certain of the research projects, the audit resorted to application of the "shrink back" rule to reduce the amount of claimed credits.

The "shrink back" rule is found at I.R.C. § 41(d). Under the rule, REC qualification rules are applied at the next most significant subset of elements of a business component after commercial production begins. The "shrinking back" continues until the qualified research requirements are fully met with regard to a subset or a series of subsets of elements of the upstream business component. Treas. Reg. 1.41-4(b)(2). The regulation provides:

Shrinking-back rule. The requirements of section 41(d) and paragraph (a) of this section are to be applied first at the level of the discrete business component, that is, the product, process, computer software, technique, formula, or invention to be held for sale, lease, or license, or used by the taxpayer in a trade or business of the taxpayer. If these requirements are not met at that level, then they apply at the most

significant subset of elements of the product, process, computer software, technique, formula, or invention to be held for sale, lease, or license. This shrinking back of the product is to continue until either a subset of elements of the product that satisfies the requirements is reached, or the most basic element of the product is reached and such element fails to satisfy the test. This shrinking-back rule is applied only if a taxpayer does not satisfy the requirements of section 41(d)(1) and paragraph (a)(2) of this section with respect to the overall business component. The shrinking-back rule is not itself applied as a reason to exclude research activities from credit eligibility. (Emphasis added).

This Letter of Findings will address separately the audit's findings and adjustments.

### **(1) Fermentation Projects.**

During 2011, Taxpayer claimed QREs on twenty-five research projects. The audit noted one significant project as the "Fermentation" project which alone represented 76 percent of the QREs claimed in 2011.

The audit found that Taxpayer's various "Fermentation Projects" constituted Taxpayer's "most notable project[s]." The audit explained that Taxpayer conducted research on equipment used during the ethanol production process, supplies used in the production process, and raw materials ("recipe") consumed in producing ethanol.

In determining that certain projects did qualify for the credit, the audit report noted in relevant part:

The research the [T]axpayer conducted was not to produce a new or improved product. This research was conducted during production runs where the [ethanol production] runs were intended and expected to produce ethanol (and byproducts) for sale.

According to the audit report, in calculating its Fermentation QREs, Taxpayer classified supplies, management and hourly wages, and contract research expenses as QREs. The audit found that Taxpayer had "actual costs for wages based on hours each employee spent on a project and for contract research."

In calculating its Fermentation supply QREs, the report stated that "[T]axpayer estimated the supplies used because the [T]axpayer did not have project specific costing data to identify exact supply costs for research projects."

The [T]axpayer estimated and claimed all production supplies (basically all cost of goods sold such as ingredients plus chemicals, utilities, lab supplies, etc.) as QREs for the different projects based on an average cost per machine hour for these supplies.

For the Fermentation projects, the audit report indicated that Taxpayer used 100 percent ("Full Cost Costing Model") of the cost of ingredients to arrive at the hourly calculation because - as claimed by Taxpayer and reflected in the audit report - the Fermentation project as "pure R&D and very high risk."

For the Fermentation 2011 research projects, the audit report stated that Taxpayer used one-third ("Conservative Costing Model") of the ingredients because Taxpayer "considered the additional projects 'less risky and the end result was less unknown meaning even though the results of the projects were unknown, they were more confident that the product would be viable.'"

The audit report noted that Taxpayer employed "machine hours" for various research projects and applied average costs per hour claiming 100 percent of ingredient costs to the machine hours of the Fermentation projects and claiming one-third average costs per hour to the machine hours for all other projects.

For 2012, Taxpayer calculated its wage QREs based on fourteen Non-Fermentation and Fermentation projects. The audit report states that Taxpayer identified "actual wage costs and contract research costs." For the supply QREs, Taxpayer estimated machine hours and an average cost per machine hour. According to the audit report:

This average cost was labeled Risk-Based Costing Model and each cost (feed stock, [redacted] utilities, lab costs, etc.) was assigned a percentage (from 0[percent] to 100[percent]) at each step of production to represent what was at risk at that step of production. Those percent[] costs were then used to arrive at an average cost per machine hour at each step of production.

The audit cited to I.R.C. § 41(d)(4)(A) - as least in part - as the basis for "exclud[ing] research conducted after the beginning of commercial production of the business production." The audit noted that Taxpayer had been

producing ethanol and ethanol byproducts for several years and "[a]t first glance, the [T]axpayer research projects do not qualify for the REC."

The audit cited to I.R.C. § 41(d)(2)(C) as "requir[ing] [T]axpayer to treat research on their manufacturing process separate from research on their products."

For some of the projects, the scope of the projects was on one aspect of the manufacturing process. However, many projects focused on both a production process and changes in the raw materials to make their products. For these projects, the information provided to the auditor did not separate the research completed on the production process from the research conducted on the change in the product raw material.

Since the audit concluded that Taxpayer was conducting research during commercial ethanol production which was - according to the audit report - excluded under I.R.C. § 41(d)(4), the audit applied the "shrink-back" rule to narrow the Taxpayer's claim "to a level where qualified research is being conducted." According to the audit report, "Any raw materials and supplies used to make finished goods that would have been purchased regardless of whether the taxpayer was engaged in qualified research are being disallowed." What follows then is the audit's application of that rule to categories of the QREs.

#### **(a) Audit Fermentation Project Adjustments:**

The audit made adjustments to QREs claimed on all of Taxpayer's Fermentation projects. As explained in the audit report, "[T]axpayer's production is continuously operating 24 hours a day/7 days a week" and the claimed research projects were conducted "during production runs that were intended and expected to produce ethanol . . . for sale as well as eliminate uncertainty concerning an aspect of the production process and/or recipe formula."

##### **(i) Wages.**

Taxpayer claimed both hourly and management wages as QREs on all research projects including Fermentation projects. However, the audit found that there was insufficient information to determine if the hourly wages were attributable to QREs or for normal ethanol production. Therefore, the audit disallowed hourly wages for all projects. The audit report indicates that Taxpayer was asked to provide detailed information substantiating that the hourly wages qualified as QREs. However, the report also indicates that the requested information was neither provided nor obtained.

The taxpayer representatives were asked several times to provide supply costs and [hourly workforce] labor costs that were outside their normal production costs. To this date, [hourly workforce] information has not been received.

##### **(ii) Supplies.**

The audit allowed but adjusted ingredient supplies used in the 2011 projects as QREs. The audit calculated the permissible QREs based on the "permissible machine hours" assigned to a particular project. However, the audit did not agree that the ingredients used in the 2012 projects qualified as a permissible expenses on the ground that the 2012 ingredients was obtained at no cost. The audit did not allow other ingredient materials -- as QREs because the cost of these materials was not known.

##### **(iii) Contract Research Expenses.**

The audit disallowed QREs claimed for the 2011 "Fermentation - New Process Development" contract project on the ground that "no explanation was given outlining the contract research performed."

#### **(2) Audit Fermentation Projects and Application of the Shrink Back Rule.**

The audit found that Taxpayer produced ethanol and byproducts 24 hours a day/7 days a week with a one week maintenance shutdown. According to the audit report, Taxpayer's research was conducted simultaneously with the day-to-day production of ethanol and byproducts.

All of the [T]axpayer production test batches were intended and expected to produce ethanol and byproducts for sale and in fact did produce ethanol and byproducts for sale. [Taxpayer] chose to conduct research during production runs. One of the exclusions in IRC section 41 is any research conducted after the beginning of commercial production of a business component (IRC 41(d)(4)(A)). The "shrink back" rule was used to shrink

back to a level of the business component to identify what is actually being tested and to not consider normal production supplies (raw material, yeast, enzymes, chemicals, utilities, lab supplies, etc.), supplies that would have been purchased whether the production research batches were done or not, as QREs.

In addressing the claimed Fermentation QREs, the audit sought more specific information related to the Taxpayer's basis for its calculations. According to the audit report, Taxpayer was repeatedly asked to supply product costs and hourly wage costs that were outside Taxpayer's normal ethanol production costs, but that the requested information was not received by the Department.

The audit considered several options to address concerns related to the claimed supply QREs. The audit considered denying all of the Fermentation QREs on the ground that the research was conducted during normal commercial ethanol production. The audit rejected this wholesale disallowance of the QREs because Taxpayer was admittedly conducting qualified research "and the IRS audit techniques guide allowed for 'shrinking back' claimed QREs."

The audit then considered a second option to accept one-third of the ingredient expenses during 2011. The audit rejected this option because the ingredients would have been purchased whether "the research production test batches were done or not."

The audit chose a third option to address the claimed supply QREs. The audit accepted the ingredient costs on projects testing the Fermentation "based on a per hour amount times the number of machine hours the taxpayer assigned to a particular project."

The audit allowed management wages on all projects, but hourly wages were not allowed.

### **(3) Specific Disallowed Non-Fermentation 2011 Projects:**

For 2011, the Department's audit disallowed claimed RECs for the following specific projects.

#### **(a) [Redacted] Index Certification Project:**

According to the Department's audit, "This project calculated the [T]axpayer's [redacted] to see if it qualified for certification by various organizations. This does not meet the definition of qualified research."

#### **(b) [Redacted] - Total Nutrient Methanator Feed:**

The audit described the projects as follows:

The taxpayer manually fed separate nutrients/chemicals into the nutrient blend tank on the methanator unit. The taxpayer replaced this process with a product that included all the nutrients/chemicals necessary. There was no process of experimentation done therefore this project does not meet the definition of qualified research.

#### **(c) [Redacted] Certification:**

According to the audit report, "This project collected data to determine if [Taxpayer] qualified for [redacted] certification and to apply for certification." The audit concluded that "Routine data collection is specifically excluded in IRC section 41(d)(4)(D)."

#### **(d) [Redacted] Micronutrient Additive:**

The audit report described the project as "add[ing] a bag of this product to each ferment in place of two chemicals as outlined in the trial plan provided by the vendor." The audit concluded that "[t]here was no process of experimentation done therefore this project does not meet the definition of qualified research."

### **(4) Specific Disallowed 2012 Software Development Project:**

#### **(a) Vertical Software - Conceptualization, Customization & Integration/Execution:**

The audit described this as a project to develop internal use software intended for "purchasing and managing the ingredients in the production of ethanol." The audit disallowed the RECs for this project on the ground that the

software was intended for general and administrative management functions and "not improvements to their products or production process." The audit cited to IRC § 41(d)(4)(E) as authority for its position that internal use software is specifically excluded.

### **(5) Summary.**

The audit rejected any possibility of accepting the QREs as originally filed because Taxpayer was claiming "cost of goods sold" expenses as QREs and the "majority of these costs would have been purchased whether the research production test batches were done or not."

The permitted QREs were "divided among the members/partners based on their ownership percentage" and the credits "were passed through to the member/partners . . ." affecting liability of those individual partners.

## **B. Taxpayer's Response.**

### **(1) Fermentation Projects.**

Taxpayer disagrees with the audit's adjustments to QREs claimed on its various Alternate Feed Stock projects. According to Taxpayer, the audit incorrectly disallowed "supply, contract, and wage costs" from QREs for the Taxable years on the basis of [the audit's] conclusion that:

[t]he Taxpayer is conducting research during commercial production which is an exclusion [from QREs] under IRC section 41(d)(4).

Taxpayer explained the basis for conducting the Fermentation projects which occurred simultaneously with Taxpayer's routine production of ethanol. Taxpayer states that it "wanted to determine if ingredients could be successfully integrated into its [ethanol] fermentation process." Taxpayer states that it "was uncertain as to the correct design of the formula or 'recipe' for combining ingredients used in the fermentation process and the amount of time necessary to optimize fermentation."

Taxpayer explains:

[Taxpayer] experimented with different proportions of ingredients as well as different combinations of ingredients and other chemicals in various fermentation process experiments in hopes of determining a recipe that would achieve a finished ethanol yield.

Taxpayer further explains:

[Taxpayer] was required to research and develop complex manufacturing process in every aspect of its manufacturing process, including feedstock handling, milling, cooling, fermenting, distilling, and evaporating which could have resulted in significant downtime, reduced productivity, and or equipment damages depending on the Fermentation experiment.

Taxpayer does not agree with the audit's conclusion disallowing any of the QREs on the ground that the expenses were incurred during "commercial production."

Taxpayer states that the audit's conclusion was incorrect as a matter of law. According to Taxpayer, I.R.C. § 41(d)(4)(A) excludes from the definition of qualified research, any research conducted after the beginning of commercial product of the business components, not research as part of or during a production.

Taxpayer states that research "conducted after the beginning of commercial production" relates to a business component which is sufficiently developed to meet the basic functional and economic requirements of a qualified project.

Taxpayer believes that the audit incorrectly excluded certain projects because "[T]axpayer has been in production for several years producing ethanol and the byproducts." Taxpayer states that the audit was mistaken because Taxpayer's projects conducted during the audit years "related to only process business components, not to its ethanol product business components."

Taxpayer explains:

A "business component" means any product, process, computer software, technique, formula, or invention which is to be (i) held for sale, lease, or license, or (ii) used by the taxpayer in a trade or business of the taxpayer. Section 41(d)(2)(B). Any plant process, machinery, or technique for commercial production of a business component shall be treated as a separate business component (and not as part of the business component being produced). Section 41(d)(2)(C). Research is treated as conducted for qualifying purposes if it relates to (i) a new or improved function, (ii) performance, or (iii) reliability or quality. Section 41(d)(3)(A).

Taxpayer argues that - in regard to the Fermentation projects - the audit's conclusion excluding or "shrinking back" "supply, contract, and wage costs" was "incorrect as a matter of law."

The audit excluded research conducted after the beginning of ethanol commercial production and applied the "shrink-back" rule to reduce Taxpayer's claim "to a level where qualified research [was] being conducted. In addition, the audit disallowed expenses related to "raw materials and supplies used to make finished goods that would have been purchased regardless of whether the [T]axpayer was engaged in qualified research . . . ."

Taxpayer criticizes the audit's application of the "shrink back" rule and criticizes the audit report's reliance on the statement that "taxpayer has been in production for several years producing ethanol and the byproducts."

Taxpayer disagrees with the shrink back decision because "these projects for the Taxable Years related to only process business components, not to its ethanol product business component." (Emphasis in original). Taxpayer disagrees with the audit's conclusion on the ground it "ignores the fact that the business component at issue here is not ethanol (i.e. product) but rather it is a process component in the form of the recipe design (i.e. the formula for mixing the ingredients)."

Taxpayer cites to I.R.C. § 41(d)(4)(A) in support of its contention. The cited provision explains when the credit is not allowed.

Activities for which credit not allowed.--The term "qualified research" shall not include any of the following:  
(A) Research after commercial production.--Any research conducted after the beginning of commercial production of the business component.

Taxpayer explains the audit's conclusion was incorrect because the cited provision only "excludes from the definition of qualified research, any research conducted after the beginning of commercial production of the business component, not research as of or during a production process . . . ."

Taxpayer explains:

In this case, [Taxpayer] engaged in several projects regarding its production process, all of which involved uncertainty as to whether the process would meet [Taxpayer's] basic functional and economic requirements. For example, in its Fermentation Projects, [Taxpayer] did not know whether a particular formula or recipe for fermentation would work or even produce a commercially viable result, including whether changes to the front end process would result in a specification back end characteristic such as [redacted]. In fact, certain processes failed to meet the basic functional and economic requirements of [Taxpayer] and were therefore abandoned.

In addition, Taxpayer specifically disagrees with the audit's application of the "shrink back" rule to supplies consumed in these formula projects.

The Auditor's disallowance of supplies (whether or not he also disallowed ingredients ignores the fact that many of [Taxpayer's] Fermentation Projects related to experiments with its fermentation formula or recipe which is a biochemical process involving all ingredients thereto. At the outset of its Projects, [Taxpayer] was uncertain as to the appropriate design of such fermentation formula or recipe incorporating ingredients even though achieving the design of a project that could produce commercially viable amounts of ethanol may have been likely.

Taxpayer further explains that these supply costs were legitimate QREs "because [the supplies] were devoted to research in eliminating uncertainty concerning the design of formulas involving certain [redacted]."

Taxpayer states that the "business component" at issue here is not "ethanol" but rather the design of its fermentation process - the formula for mixing the ethanol ingredients. Taxpayer concludes "all supply costs to

determine if that recipe will work . . . are QREs."

## **(2) Specific Fermentation Adjustments.**

### **(a) Contract Research Expenses for Fermentation Projects.**

Taxpayer disagrees with the audit's decision disallowing certain contract expenses on the purported ground that "Taxpayer did not substantiate the nature of the contract research."

Taxpayer argues that under I.R.C § 41(b)(3) it is not required to substantiate the nature of the contract research only "to show who the amounts were paid to and for what purpose."

In part, the cited provision on which Taxpayer relies states:

(3) Contract research expenses.--

(A) In general.--The term "contract research expenses" means 65 percent of any amount paid or incurred by the taxpayer to any person (other than an employee of the taxpayer) for qualified research.

### **(b) Hourly Wage Expenses for Fermentation Projects.**

Taxpayer disagrees with the audit's decision disallowing a portion of the wage expenses Taxpayer classified as QREs.

Taxpayer asserts that QREs "include any wages paid or incurred to an employee for qualified services performed by such employee." Taxpayer states that the audit was incorrect when it found the formula projects involved routine production duties.

Taxpayer complains:

The Auditor offers no explanation as to why the hourly employees had no involvement in planning, implementing, and evaluating these fermentation projects. In fact the [hourly wages] were for employees engaged in qualified research or engaging in direct support of qualified research activities and are therefore allowed under Section 41(b)(2)(B).

The cited provision provides:

(B) Qualified services--The term "qualified services" means services consisting of--

- (i) engaging in qualified research, or
- (ii) engaging in the direct supervision or direct support of research activities which constitute qualified research.

If substantially all of the services performed by an individual for the taxpayer during the taxable year consists of services meeting the requirements of clause (i) or (ii), the term "qualified services" means all of the services performed by such individual for the taxpayer during the taxable year.

Taxpayer explains that the hourly employees engaged in specific qualifying activities such as:

unplugging pipes, monitoring leaks in the equipment, adding ingredients, taking additional samples, conducting solubility and other testing, reporting the effects of changes and otherwise monitoring the experiments. In other words, the hourly employees were the "eyes and ears" of the plant during these experiments.

## **(3) Specific Non-Fermentation Project Adjustments.**

### **(a) [Redacted] Index Certification Project.**

Taxpayer disagrees with the audit's decision that expenses related to this first [redacted] certification project did not qualify for the credit.

Taxpayer does not agree that the project consisted of "routine data collection." Taxpayer explains that the certification project involved the collection of data "it did not normally collect," was specific to the [redacted] certification project, and collection of the [redacted] data was not part of Taxpayer's routine operations.



Instead, Taxpayer states that the data was collected to "resolve any uncertainty as to whether [Taxpayer] could comply with the [redacted] Directive [redacted], which mandated [redacted] ." Taxpayer explains that the certification data was necessary to establish that Taxpayer satisfied the certification requirements [five requirements redacted].

Taxpayer summarizes its position explaining that the [redacted] certification data was collected "regarding the [redacted]."

**(c) [Redacted] - Total Nutrient Methanator Feed Project.**

Taxpayer disagrees with the audit's decision disallowing expenses related to this "[redacted] project" and that the project did not meet the definition of "qualified research." Taxpayer disagrees with the audit's premise that "[t]here was no process of experimentation . . . ." within the meaning of I.R.C. § 41(d)(1)(C).

Taxpayer admits that the "Code and Regulations as in effect on January 1, 2001, do not define the phrase 'process of experimentation'" but cites to legislative history as supporting its contention that development of the [redacted] project constituted "qualified research." The cited legislative history on which Taxpayer relies provides:

The term process of experimentation means a process involving the evaluation of more than one alternative designed to achieve a result where the means of achieving that result is uncertain at the outset. This may involve developing one or more hypotheses, testing and analyzing those hypotheses (through, for example, modeling or simulation), and refining and discarding the hypotheses as part of a sequential design process to develop the overall component. Thus, for example, costs of developing a new or improved business component are not eligible for the credit if the method of reaching the desired objective (the new or improved product characteristics) is readily discernible and applicable as of the beginning of the research activities, so that true experimentation in the scientific or laboratory sense would not have to be undertaken to develop, test, and choose among viable alternatives. On the other hand, costs of experiments undertaken by chemists or physicians in developing and testing a new drug are eligible for the credit because the researchers are engaged in scientific experimentation. Similarly, engineers who design a new computer system, or who design improved or new integrated circuits for use in computer or other electronic products, are engaged in qualified research because the design of those items is uncertain at the outset and can only be determined through a process of experimentation relating to specific design hypotheses and decisions as described above. H.R. REP. NO. 99-841, at II-72.

In addition, Taxpayer cites to Treas. Reg. § 1.41-4(a)(5)(i) as supporting its contention that the [redacted] project constituted "qualified research."

For purposes of section 41(d) and this section, a process of experimentation is a process to evaluate more than one alternative designed to achieve a result where the capability or method of achieving that result is uncertain at the outset. A process of experimentation does not include the evaluation of alternatives to establish the appropriate design of a business component, if the capability and method for developing or improving the business component are not uncertain.

**(d) [Redacted] Certification [Redacted].**

Taxpayer disagrees with the audit's conclusion that the collection of data related to this [redacted] certification project did not qualify for the credit because the project consisted simply of "routine data collection."

Taxpayer does not agree that the [redacted] data collection project constituted "routine data collection." As with the previous "[redacted] Index Certification Project," Taxpayer states that the data collection was related to determining whether Taxpayer would comply with the "[redacted] Directive [redacted], which mandated [redacted]." Taxpayer cites to the identical [redacted] certification requirements as above, and points out that Taxpayer collected this data to meet these [redacted] requirements.

Taxpayer believes that the data collection project constituted qualified research because it consisted of data it did not normally collect and "analysis of the data it did normally conduct."

**(e) [Redacted] Micronutrient Additive.**

Taxpayer disagrees with the audit's decision disallowing the QREs related to this yeast additive and disagrees

that "[t]here was no process of experimentation . . ." within the meaning of I.R.C. § 41(d)(1)(C).

Taxpayer again admits that the "Code and the Regulations as in effect on January 1, 2001, do not define the phrase 'process of experimentation.'" Again, Taxpayer cites to the legislative history - H.R. REP. NO. 99-841, at II-72 and Treas. Reg. § 1.41-4(a)(5)(i) as supporting its contention that this second "nutrient project" constituted qualified research.

**(f) Vertical Software - Conceptualization, Customization & Integration/Execution.**

Taxpayer disagrees with the audit's conclusion this software development project did not qualify for the credit. Taxpayer disagrees with the audit's conclusion that the project "was one for general and administrative management functions" and not "improvements to [Taxpayer's] products or production process."

In support of its argument, Taxpayer cites to I.R.C. § 41(d)(4)(E). The provision states that "qualified research" does not include certain computer software:

(E) Computer software.--Except to the extent provided in regulations, any research with respect to computer software which is developed by (or for the benefit of) the taxpayer primarily for internal use by the taxpayer, other than for use in--

- (i) an activity which constitutes qualified research (determined with regard to this subparagraph), or
- (ii) a production process with respect to which the requirements of paragraph (1) are met.

Taxpayer admits that "internal use software does not ordinarily qualify as qualified research except for internal use software used in qualified research or production process."

However, Taxpayer cites to legislative history as elaborating "the intent behind the internal use software provision."

[T]he costs of developing software are not eligible for the credit where the software is used internally, for example, in general and administrative functions (such as payroll, bookkeeping, or personnel management) or in providing noncomputer services (such as accounting, consulting, or banking services).

H.R. REP. NO. 99-841, at II-72 (1986).

Taxpayer states that the software was developed for the purpose of "procuring and managing ingredients and the software resulted in [redacted]." As explained by Taxpayer:

The software both reduces costs and increases speed in a way that is substantial and economically significant; the development involved significant economic risk as to whether [Taxpayer] would recover its costs within a reasonable period of time including whether the Fermentation projects would be viable to all; and software of its kind for the energy sector was not commercially available.

Taxpayer concludes that although the project was for development of "internal use software," it otherwise met the applicable exceptions in I.R.C. § 41(d)(4)(E).

**(g) Ingredient Handling Project.**

Taxpayer disagrees with the audit's decision disallowing some or all of Taxpayer's supply, contract, and wages costs related to "research and experimentation relating to handling and process 'Ingredient Handling Projects.'"

Taxpayer explained that they engaged in this project "to resolve uncertainties with respect to the incorporation of ingredients into its manufacturing process." The Ingredient Handling Project "involved experimenting with (1) new handling systems, and (2) various ingredients into [Taxpayer's] fermentation facility [redacted]."

Given its development of [redacted] formulas involving Fermentation, [Taxpayer] was faced with uncertainty concerning the appropriate design of its manufacturing processes. As discussed above, [Taxpayer's] facility was designed and constructed to process [redacted] The processes involved in the Ingredient Handling Projects not only eliminating uncertainty concerning the equipment needed to off-load the ingredients, but also resolving the uncertainty of how to feed ingredients [into the fermenters at the appropriate ratios required by the formula. Consequently, through its Ingredient Handling Projects, [Taxpayer] had to develop, test, and incorporate new manufacturing processes into its facility.

### C. Hearing Analysis.

As a matter of law, it is the Taxpayer's responsibility to establish that any pending tax assessment is incorrect. As stated in IC § 6-8.1-5-1(c), "The notice of proposed assessment is prima facie evidence that the department's claim for the unpaid tax is valid. The burden of proving that the proposed assessment is wrong rests with the person against whom the proposed assessment is made." *Indiana Dep't of State Revenue v. Rent-A-Center East, Inc.*, 963 N.E.2d 463, 466 (Ind. 2012); *Lafayette Square Amoco, Inc. v. Indiana Dep't of State Revenue*, 867 N.E.2d 289, 292 (Ind. Tax Ct. 2007). Thus, a taxpayer is required to provide documentation explaining and supporting his or her challenge that the Department's position is wrong. Poorly developed and non-cogent arguments are subject to waiver. *Scopelite v. Indiana Dep't of Local Gov't Fin.*, 939 N.E.2d 1138, 1145 (Ind. Tax Ct. 2010); *Wendt LLP v. Indiana Dep't of State Revenue*, 977 N.E.2d 480, 486 n.9 (Ind. Tax Ct. 2012).

In this protest, Taxpayer seeks to demonstrate that it is entitled to claim certain QREs. IC § 6-3.1-4-4 provides that "'Research expense tax credit' means a credit provided under this chapter against any tax otherwise due and payable under [IC 6-3](#)." Similar to deductions, exemptions, and exclusions, tax credits - such as research expense credits - "are matters of legislative grace." *Stinson Estate v. United States*, 214 F.3d 846, 848 (7th Cir. 2000). Every taxpayer who claims a tax credit is required to retain records necessary to substantiate a claimed credit. Where such a credit is claimed "the party claiming the same must show a case, by sufficient evidence, which is clearly within the exact letter of the law." *Indiana Dep't. of State Revenue, Sales Tax Division v. RCA Corp.*, 310 N.E.2d 96, 100-01 (Ind. Ct. App. 1974) (citing *Conklin v. Town of Cambridge City*, 58 Ind. 130, 133 (1877)). Citing *Stinson Estate*, the Fifth Circuit Court of Appeals in *United States v. McFerrin* summarized that "[t]ax credits are a matter of legislative grace, are only allowed as clearly provided for by statute, and are narrowly construed." *United States v. McFerrin*, 570 F.3d 672, 675 (5th Cir. 2009).

Nevertheless, the Department is well aware of the countervailing rule that a "statute must not be construed so narrowly that it does not give effect to legislative intent because the intent of the legislature embodied in a statute constitutes the law." *General Motors Corp. v. Indiana Dept. of State Revenue*, 578 N.E.2d 399, 404 (Ind. Tax Ct. 1991).

In determining whether Taxpayer is entitled to claim the credits as originally submitted, it is Taxpayer's responsibility to maintain records fully justifying the credit. As stated in *Conklin v. Town of Cambridge City*, 58 Ind. 130, 133 (1877), "[W]here such an exemption is claimed, the party claiming the same must show a case, by sufficient evidence, which is clearly within the exact letter of the law."

Indiana law requires that every person subject to a listed Indiana tax keep books and records, including all source documents "so that the [D]epartment can determine the amount, if any, of the person's liability for that tax by reviewing those books and records." IC § 6-8.1-5-4(a).

More specifically to the question of verifying and justifying QREs, the IRS's own Audit Technique Guide provides useful guidance stating in relevant part:

**Substantiation and Record Keeping:** Under the final regulations, a taxpayer must retain records in sufficiently usable form and detail to substantiate that the expenditures claimed are eligible for the credit. See I.R.C. § 6001; Treas. Reg. § 1.6001-1. The taxpayer must clearly establish full compliance with all of the relevant statutory and regulatory requirements. Failure to maintain records in accordance with these rules is a basis for disallowing the credit.

The Service does not have to accept estimates of qualified research expenses if documentation exists to verify the actual amount of such expenses. As set forth above, taxpayers are required to keep records substantiating the amount of any reported, claimed, or affirmatively raised deductions or credits.

The courts will allow the use of an estimation method only where the taxpayer does not have contemporaneous records, and then only as long as the following two conditions are satisfied. First, the taxpayer must establish that it engaged in qualified research activities as defined in section 41(d). And second, the failure to maintain a proper system to capture relevant information cannot be an "inexactitude is of their own making." Estimation methods are permitted only in cases where the sole issue is the exact amount paid or incurred in the qualified research activity. Accordingly, taxpayers must have factual support for every assumption underlying their estimates to meet their burden of proof. Audit Techniques Guide: Credit for Increasing Research Activities (i.e. Research Tax Credit) IRC § 41 - Substantiation and Recordkeeping, <http://www.irs.gov/Businesses/Audit-Techniques-Guide:-Credit-for-Increasing-Research-Activities->

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(i.e.-Research-Tax-Credit)-IRC-§ 41 (last visited January 2, 2015). (Emphasis added).

In Taxpayer's case, the IRS guidance bears repeating: "[A] taxpayer must retain records in sufficiently usable form and detail to substantiate that the expenditures claimed are eligible for the credit." In situations in which precise detail is lacking and in which the Taxpayer "estimates" the amount of the credits, "[T]axpayer must have factual support for every assumption underlying their estimates to meet their burden of proof."

For Indiana income tax purposes, the state follows the federal tax scheme with certain modifications. IC § 6-3-2-1(b); IC § 6-3-1-3.5(b). Indiana also provides tax credits which a taxpayer may claim to reduce its taxable income. One of the tax credits is the "Indiana qualified research expense tax credit" under IC § 6-3.1-4-2, which states in relevant part:

As used in this chapter: "Indiana qualified research expense" means qualified research expense that is incurred for research conducted in Indiana.

"Qualified research expense" means qualified research expense **(as defined in Section 41(b) of the Internal Revenue Code as in effect on January 1, 2001).**

**(Emphasis added).**

IC § 6-3.1-4-2(a) allows the RECs for a taxpayer who incurs Indiana qualified research expense for the taxable year. The REC is derivative of the federal research and development credit under Section 41 of the Internal Revenue Code and the Treasury Regulations in effect as of January 1, 2001. Because the Indiana REC is derivative of federal law, it incorporates its provisions and federal court's interpretations are persuasive authority. *Snyder v. Indiana Dep't of State Revenue*, 723 N.E.2d 487, 491 (Ind. Tax Ct. 2000).

IC § 6-3.1-4-4 provides:

The provisions **of Section 41 of the Internal Revenue Code as in effect on January 1, 2001, and the regulations promulgated in respect to those provisions and in effect on January 1, 2001, are applicable to the interpretation and administration . . . . (Emphasis added).**

Indiana's research expense credit piggy-backs on the federal tax credit which is a business tax credit under I.R.C. § 41 and is intended for companies that incur research and development costs in the United States. Indiana QREs are only allowed for expenses incurred in Indiana.

In order to claim the REC, a taxpayer must demonstrate it engaged in qualified research. "Qualified research" is defined in I.R.C. § 41(d), as follows:

- (1) In general.--The term "qualified research" means research--
  - (A) with respect to which expenditures may be treated as expenses under section 174,
  - (B) which is undertaken for the purpose of discovering information--
    - (i) which is technological in nature, and
    - (ii) the application of which is intended to be useful in the development of a new or improved business component of the taxpayer, and
  - (C) substantially all of the activities of which constitute elements of a process of experimentation for a purpose described in paragraph (3). Such term does not include any activity described in paragraph (4).
- (2) Tests to be applied separately to each business component.--For purposes of this subsection--
  - (A) In general.--Paragraph (1) shall be applied separately with respect to each business component of the taxpayer.
  - (B) Business component defined.--The term "business component" means any product, process, computer software, technique, formula, or invention which is to be--
    - (i) held for sale, lease, or license, or
    - (ii) used by the taxpayer in a trade or business of the taxpayer.
  - (C) Special rule for production processes.--Any plant process, machinery, or technique for commercial production of a business component shall be treated as a separate business component (and not as part of the business component being produced).
- (3) Purposes for which research may qualify for credit.--For purposes of paragraph (1)(C)--
  - (A) In general.--Research shall be treated as conducted for a purpose described in this paragraph if it relates to--
    - (i) a new or improved function,

- (ii) performance, or
- (iii) reliability or quality.

(B) Certain purposes not qualified.--Research shall in no event be treated as conducted for a purpose described in this paragraph if it relates to style, taste, cosmetic, or seasonal design factors.

(4) Activities for which credit not allowed

The term "qualified research" shall not include any of the following:

(A) Research after commercial production

Any research conducted after the beginning of commercial production of the business component.

(B) Adaptation of existing business components

Any research related to the adaptation of an existing business component to a particular customer's requirement or need.

(C) Duplication of existing business component

Any research related to the reproduction of an existing business component (in whole or in part) from a physical examination of the business component itself or from plans, blueprints, detailed specifications, or publicly available information with respect to such business component.

A "business component" is any product, process, computer software, technique, formula, or invention which is: held for sale, lease, or license; or used by the taxpayer in a trade or business of the taxpayer. I.R.C. § 41(d)(3)(A).

I.R.C. § 41(b) also provides that:

Qualified research expenses.--For purposes of this section--

(1) Qualified research expenses.--The term "qualified research expenses" means the sum of the following amounts which are paid or incurred by the taxpayer during the taxable year in carrying on any trade or business of the taxpayer--

- (A) in-house research expenses, and
- (B) contract research expenses.

(2) In-house research expenses.--

(A) In general.--The term "in-house research expenses" means--

- (i) any wages paid or incurred to an employee for qualified services performed by such employee. . .

(B) Qualified services.--The term "qualified services" means services consisting of--

- (i) engaging in qualified research, or
- (ii) engaging in the direct supervision or direct support of research activities which constitute qualified research. . .[.]

(C) Supplies.--The term "supplies" means any tangible property other than--

- (i) land or improvements to land, and
- (ii) property of a character subject to the allowance for depreciation.

(Emphasis added).

I.R.C. § 41(b)(1) provides the credit as a sum of in-house research expenses and contract research expenses.

As here relevant, Treas. Reg. § 1.41-2 further illustrates "qualified research expenses."

(a) Trade or business requirement--(1) In general. An in-house research expense of the taxpayer or a contract research expense of the taxpayer is a qualified research expense **only if the expense is paid or incurred by the taxpayer in carrying on a trade or business of the taxpayer.** The phrase "in carrying on a trade or business" has the same meaning for purposes of section 41(b)(1) as it has for purposes of section 162. . . . A research expense must relate to a particular trade or business being carried on by the taxpayer at the time the expense is paid or incurred in order to be a qualified research expense.

(c) Qualified services--

(2) Direct supervision. **The term "direct supervision" as used in section 41(b)(2)(B) means the immediate supervision (first-line management) of qualified research (as in the case of a research scientist who directly supervises laboratory experiments, but who may not actually perform experiments). "Direct supervision" does not include supervision by a higher-level manager to whom first-line managers report, even if that manager is a qualified research scientist.**

(3) Direct support. **The term "direct support" as used in section 41(b)(2)(B) means services in the**

**direct support of either--**

- (i) **Persons engaging in actual conduct of qualified research, or**
- (ii) **Persons who are directly supervising persons engaging in the actual conduct of qualified research.**

. . . . .

**(e) Wages paid for qualified services--**(1) In general. Wages paid to or incurred for an employee constitute in-house research expenses **only to the extent the wages were paid or incurred for qualified services performed by the employee.** If an employee has performed both qualified services and nonqualified services, only the amount of wages allocated to the performance of qualified services constitutes an in-house research expense. In the absence of another method of allocation that the taxpayer can demonstrate to be more appropriate, the amount of in-house research expense shall be determined by multiplying the total amount of wages paid to or incurred for the employee during the taxable year by the ratio of the total time actually spent by the employee in the performance of qualified services for the taxpayer to the total time spent by the employee in the performance of all services for the taxpayer during the taxable year.

**(Emphasis added).**

In summary, federal and Indiana law provide a general business tax credit for companies that incur certain, specific research and development costs. In general, I.R.C. § 41 allows the credit for four types of expenses. The credit is allowed for:

- **Wages:** I.R.C. 41(b)(2)(D) allows the credit for in-house research and development. The credit is allowed for wages paid to employees for performing "Qualified Services." Those services include actively engaged in qualified research, directly supervising qualified research, or supporting qualified research.

The term, "engaged in qualified research," requires the direct conduct of research and development, which includes first-line supervision of qualified research but does not include upper level managers to whom first line supervisors report.

- **Supplies:** I.R.C. § 41(b)(2)(C) defines "supplies" as any tangible property - other than real property - subject to depreciation. To qualify, the supply expenses must be directly related to "qualified research activities" which includes prototypes and testing materials.
- **Contract Research:** I.R.C. § 41(b)(2)(B) and Treas. Reg. § 1-41-2(e) allows the credit for qualified research conducted by a third party on behalf of the taxpayer.
- **Basic Research Expenses:** I.R.C. § 41(e)(2) qualifies basic research payments made to qualified non-profit organizations and institutions. "Basic research" refers to fundamental research evaluating theories and hypothesis regardless of an application.

Both federal and Indiana law excludes certain research activities as here briefly summarized:

- Research conducted after the start of commercial production of the "business components;"
- Adaption of existing business components;
- Duplicating of existing business components;
- Reverse Engineering;
- Surveys, studies, or activities related to management, market research, routine data collection, or routine testing and quality control;
- Software developed for internal use;
- Research conducted outside the United States;
- Research related to social sciences, art, or humanities;
- Research which has been funded by another person or governmental unit.

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**D. Conclusions.****(1) Specific Disallowed Non-Fermentation 2011 and 2012 Projects.****(a) [Redacted] Index Certification Project.**

The Department does not agree that costs related to the collection of information related to its product's [redacted] qualify for deduction as QREs. The Department acknowledges that the certification data was useful, necessary, environmentally responsible or that - in the absence of the [redacted] certification requirement - it would "not normally collect" this data. Taxpayer is in the business of producing ethanol and, by extension, is in the energy production business. Given that Taxpayer is in the energy production business, and that there is no evidence that this data was itself collected "for the purpose of discovering information . . . technological in nature . . . and intended to be useful in the development of a new or improved business component" (I.R.C. § 41(d)(1)(B)), this [redacted] compliance certification project falls squarely within the ambit of "routine data" collection specifically excluded under I.R.C. § 41(d)(4)(D).

**(b) [Redacted] Certification.**

For virtually the same reasons, the Department does not agree that expenses related to the collection of compliance certification data qualifies as QREs. The Department acknowledges Taxpayer's argument that it was necessary to collect the data pursuant to the [government] Directive" to comply with certain [redacted] standards. However, this is the business Taxpayer chose to be in. As such, the collection of such data is a matter of routine compliance with the governmental standards set out for Taxpayer. There is little to indicate that there is anything experimental, developmental, or technological, about this data collection project and there is no indication that collection of this data would directly lead to the "development of a new or improved business component . . . ." I.R.C. § 41(d)(1)(B). As with the previous data collection project, there is nothing to indicate that collection of this [redacted] data would lead to "a new or improved function," enhance the "performance" of Taxpayer's ethanol, or increase the "reliability or quality" of its fuel product. I.R.C. § 41(d)(3)(A).

**(c) Vertical Software - Conceptualization, Customization, & Integration/Execution.**

The Department agrees with Taxpayer's generalization that "internal use software does not ordinarily qualify as qualified research except for internal use software used in qualified research or production process." In this case, the expenses at issue relate to the development of computer software "for purchasing and managing the ingredients . . . ." As described previously, Taxpayer's claimed that costs associated with its development of ingredients constitute QREs. As described by Taxpayer, the software reduces costs associated with the acquisition and management of these various ingredients and assists Taxpayer in determining whether implementation of any of the fermentation projects would be economically viable. All of this is very well and good but the question is whether these software development costs constitute QREs; they do not. As described in both the audit and in Taxpayer's protest, the software is functional and managerial and not associated or directly related to the development of a "new and improved" means of producing a superior form of ethanol.

**(d) [Redacted] - Total Nutrient Methanator Feed.**

In an earlier incarnation of its routine ethanol production process, Taxpayer "manually fed separate ingredients into [its] [process]. . . ." which resulted in the production of ethanol which can then be captured for commercial use. According to the audit report, Taxpayer replaced this process with a single product which included all the nutrients and chemicals necessary to produce ethanol. The audit disallowed the claimed QREs on the ground that there was no "experimentation" involved in the process change.

Taxpayer disagrees stating the prior process resulted in "feeding inconsistency, incomplete feeding . . . , additional [required] workforce, and insufficient micronutrient feeding." As Taxpayer explains, "There was technical uncertainty as to capability . . . whether the pre-blended product would be as effective as the product produced by feeding the separate ingredients through the process."

The Department is unable to agree that this alteration of Taxpayer's production process represents a process of experimentation. Although there may well have been uncertainty as to the effectiveness of this production improvement, whatever trial-and-error Taxpayer may have conducted in implementing this improvement to its production process is not evident in the documentation supplied by Taxpayer. In addition, although the audit denied the credit on the ground that there was no evident "experimentation," it is well worth noting that the improvement occurred years after "the beginning of commercial production of the business component" and is

specifically excluded under I.R.C. § 41(b)(4)(A).

**(e) [Redacted] Micronutrient Additive.**

The audit described this project as "adding a bag of [Redacted] Micronutrient Additive to each ferment in place of two chemicals [specified] by the vendor." In response, Taxpayer cites to the legislative history in support of its argument that this apparently routine alteration of its production process constitutes "experimentation" which "may require continuous development of hypotheses, testing and analysis." The Department disagrees for much the same reason as cited immediately above. There is no evidence of "trial and error," no evidence of "experimentation," and no evidence of testing or discovery of something previously unknown. Including this particular additive represents implementation of a routine refinement of Taxpayer's ethanol production which occurred well after the beginning of Taxpayer's commercial production of that ethanol and - in the absence of evidence to the contrary - is specifically excluded pursuant to I.R.C. § 41(d)(4) and Treas. Reg. § 1.41-4(c)(2).

**(f) Ingredient Handling Project.**

Taxpayer explains that it experimented with various "ingredient handling" projects related to the introduction of ingredients into its ethanol production process. Taxpayer explains that the "cumulative knowledge" obtained was "a result of its experiments in handling ingredients. . . ." Taxpayer indicates that it has applied for a patent on "new manufacturing processes . . . ." The audit report states that "[t]his research was conducted during production runs where the runs were intended to produce ethanol (and byproducts) for sale."

I.R.C. § 41(d)(4) excludes activities for which no credit is available. Specifically, the provision excludes both "[a]ny research conducted after the beginning of commercial production of the business component." In addition, Treas. Reg. § 1.41-4(c)(2) excludes "certain additional activities related to [a] business component" including "[t]rouble shooting involving detecting faults in production equipment or processes." There is little documentation clearly establishing to what extent - and at what specific cost - the improvements to Taxpayer's ingredient handling process stem from repeated trial-and-error, experimentation, or the development of specific new and improved processes. The described handling process appears to be a refinement of existing processes to adapt it to ingredients used in its ethanol production process. Taxpayer's previous equipment was apparently not adequate, refined, or sufficiently advanced to handle the Fermentations Taxpayer proposed to add to its ethanol production. However the audit report points out that Taxpayer was well into routine production of ethanol when the ingredient handling process was modified. There is insufficient information to sustain Taxpayer on this issue.

**(2) Application of the Shrink Back Rule to Fermentation QREs.**

Under I.R.C. § 41(d)(4)(A) both the audit and Taxpayer are clear that the credit does not apply in instances "after the beginning of commercial production . . . ." However, the audit chose to address research activities which were conducted during Taxpayer's manufacture of its ethanol. The audit addressed these "[redacted]" activities by virtue of the shrink back rule despite the fact all of these activities were conducted "during production runs which were intended and expected to produce ethanol . . . for sale." Nonetheless, Taxpayer disagreed with the application of that rule to certain expenses incurred during these [redacted] activities and asserts that all costs associated with its Fermentation projects constitute QREs.

**(a) Contract Research Expenses for Fermentation Projects.**

The audit disallowed these contract expenses on the ground that Taxpayer "did not substantiate the nature of the contract research." Taxpayer disagrees stating it is not required to substantiate these expenses and only needs "to show that the amounts were paid and for what purpose." To a very limited extent, Taxpayer is correct. I.R.C. § 41(b)(5) allows a taxpayer to claim "65 percent of any amount paid or incurred to any person . . . for qualified research." However, Taxpayer glosses over the fact that the credit applies to 65 percent of costs paid "for qualified research." Taxpayer believes it is entitled to credit for 65 percent of amounts paid to its various contractors and has supplied copies of invoices detailing amounts paid those contractors. However, there is nothing which establishes what - if any - "qualified research" was conducted by those contractors.

**(b) Hourly Wage Expenses for Fermentation Projects.**

The audit disallowed upstream wage expenses on the ground that wages were paid to persons "involved in normal production duties." Taxpayer disagrees stating that the hourly wages were paid to persons "engaged in qualified research" and that the wages can be claimed as a QRE under I.R.C. § 41(b)(2)(B) because these persons were the "eyes and ears" of Taxpayer. Perhaps so, but the audit report is clear that there "was



insufficient information to determine to what extent these hourly wages were attributable to research activities and to what extent the wages were attributable to routine production of its ethanol production. As Taxpayer itself explains, the wages were paid to persons "unplugging pipes," "adding ingredients," and "conducting "solubility and other testing" all of which would appear to describe routine ethanol production. Taxpayer does state it paid employees to "report the effects of [production] changes" and to "monitor[] experiments." However, there is nothing which documents what wages were paid for routine production activities and what wages were paid for qualified research; there is nothing to clearly establish where routine ethanol production ended and where "qualified research" began. Taxpayer is reminded that the audit denied the requested credit only after it repeatedly requested this same specific information.

### **(c) Supplies.**

According to the audit, Taxpayer originally "estimated and claimed all production supplies" as QREs. The supplies included "raw materials . . . chemicals, utilities, lab supplies" based on an "average cost per machine hour" for these supplies. Taxpayer did so because the supplies were consumed in projects which it classified as "very high risk" or "less risky." The audit reduced (shrunk back) - but did not entirely discard - Taxpayer's claimed supply QREs because the "raw materials and supplies . . . would have been purchased regardless of whether the [T]axpayer was engaged in qualified research . . . ." In addition, the audit disallowed other claimed supply QREs because some of the materials were "obtained at no cost" or because the "cost of [some] materials was not known."

The audit report notes that it "repeatedly" sought from Taxpayer more specific information on its claimed supply QREs but that the requested information was not received. The Department is prepared to agree that Taxpayer apparently purchased materials and supplies consumed or used in its various Fermentation projects and that audit recognized that Taxpayer was entitled to claim these costs as QREs based on a limited application of the shrink back rule.

The audit considered various alternatives but determined that it would accept Fermentation QREs based on the "number of machine hours the [T]axpayer assigned to a particular [research] project."

Nonetheless, Taxpayer now asks the Department to overturn the audit's decision and recognize that "all supply costs" associated with its fermentation projects "recipe" constitute QREs. The Department is unable to agree that it has clearly established that all of the claimed supply costs are directly related to "qualified research" as defined under I.R.C. § 41(b)(2)(C). The Department does not agree that Taxpayer has met its burden of establishing that the audit erred when it granted supply credits based on "machine hours" assigned to a specific research project but disallowed supply credits when Taxpayer was apparently unable to supply information that the credits were not attributable to one of those specific projects.

### **(3) Conclusion.**

As explained at the outset, a taxpayer seeking these credits is required to provide "sufficient evidence, which is clearly within the exact letter of the law" in order to establish that it is entitled to those credits. RCA Corp. 310 N.E.2d 100-01. In this case, Taxpayer claims QREs which are attributable to a complex and technologically sophisticated [redacted] fuel production process and disputes the audit's specific decisions allowing a portion of these claimed credits and disallowing - or limiting - other claimed credits. As in all such cases, the audit was a better position to communicate directly and immediately with the Taxpayer and review the source records available at the time of that audit. Although Taxpayer has submitted a lengthy and detailed protest, there is insufficient justification to now second-guess the audit's determinations on these issues in an administrative process once-removed from the original, months-long audit review, and Taxpayer's protest must be denied.

## **FINDING**

Taxpayer's protest is respectfully denied.

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