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A close-up photograph of a hand holding a blister pack of blue capsules. The blister pack is white and contains several blue capsules. The background is blurred, showing a person in a white lab coat.

Improving Packaging Design ROI by Taking Advantage of the R&D Tax Credit

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R & D

Yair Holtzman of Anchin, Block & Anchin examines how expenses to improve packaging design can qualify for research and development tax credits. As new materials, labeling methods and recycling demands mark a period of change for the industry, Holtzman writes that packaging companies “should look closely at research credits even if they are under the impression that their product or process development activities don’t qualify.”

Improving Packaging Design ROI by Taking Advantage of the R&D Tax Credit

BY YAIR HOLTZMAN

How Can the R&D Tax Credit Increase Your Packaging Design ROI?

The packaging design industry is an essential component of the U.S. economy, driving innovation for most other sectors, particularly manufacturing. The packaging industry touches all consumer and commercial use products, and accounts for more than \$500 billion in revenue.¹

¹ Nick Neil-Boss and Ken Brooks, “Unwrapping the Packaging Industry” (2014).

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The industry is currently going through a tremendous period of change that will help define opportunities and challenges in both the short and the long term. This includes development and implementation of new materials in products, research of new designs with convenience functionality, packaging with higher amounts of recyclable content, new label printing methods and lower amounts of scrapped materials.

Companies that don’t invest in the capabilities above risk missing the opportunity for achieving and maintaining competitive advantages.

The packaging industry is expected to experience continued growth and evolution over the next decade. Among the major drivers are trends toward smaller households, increasing requirements for convenience, on-the-go lifestyles and increasing awareness of environmental issues associated with packaging.²

² “Position Paper Market Trends and Developments.” World Packaging Organization, April 17, 2008.

Package film testing is an example of a process/product innovation. A new ASTM International standard for packaging gas permeation was released in 2015, F3136-15. The measurement of gas permeation that is oxygen transmission rate (OTR) data is critical in determining the barrier of different packaging materials. There has been extensive development in instrumentation to develop more efficient and effective testing tools. Further developments in oxygen sensor instrumentation, measuring the amount of oxygen that permeates through film over time, is critical to the industry. A key feature in the latest developments is that the oxygen sensor doesn’t consume oxygen during measurement, which was a key problem in the past. This is an example of how innovative this industry can be on the process side of the development effort.

Packaging innovation is a key driver in helping manufacturing companies deliver on strategic goals by getting the right products to market with speed and establishing significant competitive differentiation. Research and development is the key to critical innovations for developers and manufacturers of packaging products.

These companies are constantly working to create new or improved products and improve the functionality, performance, reliability and/or quality of their existing products. Accomplishing these objectives can be technically challenging and enormously expensive.

Packaging R&D Challenges

Companies within the packaging industry frequently encounter issues related to developing more cost-effective packaging designs, sourcing raw materials and other inputs, supply chain management, compliance with safety and regulatory standards, improvement in product yield and scalability, while striving to keep product pricing competitive. Addressing and overcoming these issues and other scientific technical uncertainties is critical to running a successful manufacturing business.

Both product and process development activities should be evaluated for inclusion in the research and development tax credit analysis. An example of a product innovation would be a flexible tube with gussets delivering a source-reduced format for food, shampoo and other products that are highly viscous. This design enhances product removal from the package to reduce waste.

Importantly, the ultimate success of a project isn't required in order to qualify for and claim R&D incentives, since employee activities related to projects that ultimately fail are rewarded the same as projects that succeed.

Alternatives to the current rigid container space are constantly being worked on. Advantages of innovative packaging design include reduced package weight, improved product-to-package ratio, minimized storage and shipping of empty containers, reduced waste, enhanced consumer experience through improved squeezability and better product evacuation from the container.

Another product innovation example is a label that magnifies. A new patented label technology, patent No. 8,947,794 issued in February 2015, integrates a magnifier lens and helps readability and also provides enhanced product security benefits. Readability is a significant patient safety concern for pharmaceutical products. The technology provides a unique combination of user functionality and product security that provides a real value add to the consumer.

Within the industry, there is a constant drive to develop more cost-effective packaging solutions through introduction of new materials and methods, downgaug-

ing and process improvement to reduce scrap. This includes development and evaluation of new container designs, molding techniques and printing technologies. In addition to the actual packages, machinery and technology also has to be optimized to improve overall equipment effectiveness (OEE).

Due to the constantly rising cost of raw materials and the need for competitive pricing in a global economy, supply chain management has become increasingly important for packaging companies. Supply chain management includes the use of electronic procurement, lean manufacturing and just-in-time inventory systems. Increasingly, companies within the packaging industry are focusing their efforts on Six Sigma and "kaizen" strategies in order to optimize their manufacturing processes and methods. Identifying better and cheaper raw materials and managing the use of other inputs such as fuel and utilities is extremely important for remaining competitive.

Packaging companies must also keep abreast of ever-changing sustainability, safety and regulatory issues. This usually involves managing and reducing pollution and optimizing the use of energy and other nonrenewable resources. Companies must maintain compliance with federal and state regulations, such as from the Food and Drug Administration and the Environmental Protection Agency.

All of these efforts are often time-consuming and expensive, however, overcoming such uncertainties is essential for companies that develop new products and improve upon existing products.

Fortunately, the federal government as well as certain state and local governments provide economic incentives to counter and help overcome such technical uncertainties. Importantly, the ultimate success of a project isn't required in order to qualify for and claim these incentives, since employee activities related to projects that ultimately fail are rewarded the same as projects that succeed.

Packaging companies should look closely at research credits even if they are under the impression that their product or process development activities don't qualify. Often, credits are mistakenly assumed to apply only to the creation of a ground-breaking new product, process or package developments, however they also apply to incremental product and process improvement activities that most companies already perform.

What Is the R&D Tax Credit?

The federal research and development (R&D) tax credit, also known as the research and experimentation (R&E) tax credit, was first introduced by Congress in 1981. The purpose of the credit is to reward U.S. companies for increasing spending on research and development within the U.S.

The R&D tax credit is available to businesses that uncover new, improved or technologically advanced products, processes, principles, methodologies or materials. In addition to "revolutionary" activities, in some cases the credit may be available if the company has performed "evolutionary" activities such as investing time, money and resources toward improving its products and processes.

Correctly calculating the R&D tax credit is critical because the credit can be used to lower the effective tax rate a company pays and to increase cash flow.

How Does the R&D Tax Credit Work?

The R&D tax credit is available to taxpayers who incur incremental expenses for qualified research activities (QRAs) conducted within the U.S. The credit is comprised primarily of the following qualified research expenses (QREs):

- internal wages paid to employees for qualified services,³ including those individuals directly performing the science as well as those individuals directly supporting and supervising these individuals;
- supplies used and consumed in the R&D process⁴;
- contract research expenses⁵ (when someone other than an employee of the taxpayer performs a QRA on behalf of the taxpayer, regardless of the success of the research. See the contract research section below for a further discussion of these expenses); and
- basic research payments made to qualified educational institutions and various scientific research organizations.⁶

For an activity to qualify for the research credit, the taxpayer must show that it meets the following four tests⁷:

- The activity must rely on a hard science, such as engineering, computer science, biological science or physical science.
- The activities must relate to the development of new or improved functionality, performance, reliability or quality features of a structure or component of a structure, including product or process designs that a firm develops for its clients.
- Technological uncertainty must exist at the outset of the activities. Uncertainty exists if the information available at the outset of the project doesn't establish the capability or methodology for developing or improving the business component, or the appropriate design of the business component.
- A process of experimentation (e.g. an iterative testing process) must be conducted to eliminate the technological uncertainty. This includes assessing a design through modeling or computational analysis and experimenting with a material's durability or longevity.

Once it is established that the activities qualify, a thorough analysis must be performed to determine that the taxpayer has assumed the financial risk associated with,⁸ and will have substantial rights to,⁹ the products and/or processes that are developed through the work completed.

³ Wages are defined to include amounts considered to be wages for federal income tax withholding purposes. I.R.C. Sections 41(b)(2)(D)(i), 3401(a).

⁴ Supplies are defined as any tangible property other than land or improvements to land, and property subject to depreciation. I.R.C. Section 41(b)(2)(C).

⁵ I.R.C. Section 41(b)(3).

⁶ I.R.C. Section 41(b)(3)(C).

⁷ I.R.C. Section 41(d)(1).

⁸ Treas. Reg. Section 1.41-2(e)(2).

⁹ Treas. Reg. Section 1.41-2(e)(3); see also *Lockheed Martin Corp. v. United States*, 210 F.3d 1366 (Fed. Cir. 2000).

The next step is to develop a methodology for identifying, quantifying and documenting project costs that may be eligible for the R&D credit. Costs that qualify for the credit include wages of employees involved in developing new or improved products or processes, supplies used or consumed during the research process and 65 percent of fees paid to outside contractors who provide qualifying R&D services on behalf of the taxpayer.

Determining the true cost of R&D is often difficult because few companies have a project accounting system that captures many of the costs for support provided by the various personnel who collaborate on R&D. The typical project tracking system wouldn't include contractor fees, direct support costs and salaries of high-level personnel who participate in the research effort.

Appropriate documentation may require changes to the company's record-keeping processes because the burden of proof regarding all R&D expenses claimed is on the taxpayer. The company must maintain documentation to illustrate nexus between qualifying research expenses and qualifying research activities. According to the IRS Audit Techniques Guide for the R&D credit, the documentation must be contemporaneous, meaning that it was created in the ordinary course of conducting the qualifying research activities. Furthermore, a careful analysis should take place to evaluate whether expenses associated with eligible activities performed in the company outside of the R&D department may have been missed and can be included in the R&D tax credit calculation. This is accomplished by interviewing personnel directly involved in R&D or those who are in support or supervision of R&D efforts.

In *Union Carbide Corp. v. Commissioner*, T.C. Memo 2009-50, the U.S. Tax Court applied the "Cohan rule" to hold that a taxpayer can rely on reasonable estimates when actual expenditures aren't available through oral testimony. Specifically, employees could be interviewed to identify completed research projects, the work performed and the amount of time spent by each employee.

This court opinion is favorable to taxpayers in its application of the type of evidence needed to support a research credit claim. For taxpayers without detailed time records, reasonable estimates based on the long-standing rule in *Cohan v. Commissioner*, 39 F.2d 540 (2d Cir. 1930), may be allowed. However, it is still always preferential to keep contemporaneous documentation in support of research activities.

Claiming Contract Research Expenses

Since contract research organizations (CROs) are commonplace in the packaging industry, we discuss how these expenses should be treated from a tax code Section 41 perspective. A CRO is an organization that provides support to an industry manufacturer in the form of research services outsourced on a contract basis.

Contract research is often an area where taxpayers may neglect to claim and not take Section 41 R&D credits. Research that is reimbursed by customers can qualify if, pursuant to the contract, the taxpayer is economically at risk and retains substantial intellectual property rights in the research conducted.

Under Section 41(d)(4)(H), the R&D tax credit isn't available to a taxpayer for any research activity to the

extent that such research is “funded” by a grant, contract or other arrangement. Congress enacted the funding limitation to restrict research credit benefits to a single taxpayer in a given transaction. That said, the limitation is imperfect in that two parties often claim the same costs as qualified research expenses (QREs). Alternatively, in some transactions, no party is allowed to claim the expenditures.

The Section 41 regulations provide a major exception to the “funding” exclusion (in Treasury Regulations Section 1.41-4A(d)). Under the regulations, research performed by a taxpayer on behalf of another isn’t funded if both:

- the taxpayer retains “substantial rights” in the research; and,
- the payment to the taxpayer is contingent on the success of the research (i.e., the taxpayer is “at risk” of bearing the research costs upon failure of the project).

Are ‘Substantial Rights’ in Research Retained?

If your company performs research on behalf of another entity and retains no substantial rights to the research results under the terms of the contract, the research is treated as funded. Although the Section 41 regulations don’t define substantial rights, they do state that a taxpayer doesn’t retain substantial rights when the party for whom the research is performed has the exclusive right to exploit the results of the research and the taxpayer must pay for the right to use the research results (Treas. Reg. Section 1.41-4A(d)(2)).

So long as exclusive rights aren’t vested in another party, you can “share” substantial rights in the research results.

As the court held in *Lockheed Martin Corp. v. United States*, 210 F.3d 1366 (Fed. Cir. 2000), the right to use research results without paying for such right, even if not an exclusive right, is substantial. Still, if your company must pay a royalty to obtain a non-exclusive license to use the research results, then you don’t retain substantial rights in the research.

Thus, so long as exclusive rights aren’t vested in another party, you can “share” substantial rights in the research results. For example, under the terms of many contracts, taxpayers performing development on behalf of another entity often retain the right to use any knowledge gained while conducting the research in future applications. This is the case even though the technical drawings, blueprints or product specification sheets generated during the research activities may remain the property of the customer.

Although Treas. Reg. Section 1.41-4A(d)(2) states that incidental benefits retained by a taxpayer (e.g., increased experience in a field of research) don’t constitute substantial rights in the research, the Tax Court in *Union Carbide*, when discussing whether Union Carbide’s research was funded, stated that the taxpayer had retained all rights to use the results of its plant tests and “that the information the taxpayer gained from the research was valuable to the researcher irrespective of

whether the resulting product was ultimately licensed or not.”

At Risk Test

Amounts paid to a taxpayer under an agreement that are contingent on the success of the research (and thus considered to be payments for the product or research results rather than for research performed on the payor’s behalf) aren’t treated as funding of the research. According to *Fairchild Indus., Inc. v. United States*, 71 F.3d 868 (Fed. Cir. 1995), the seminal case on the subject, the determination of whether you are at risk turns on which party bears the research costs upon failure of the project. When retention of payments to you is contingent on performance, such as the successful design and/or development of a new product or process, you bear the risk of failure.

The two recent *Geosyntec* court cases highlight the issues related to funded research and are examined below.

‘Geosyntec’ Court Case—District Court. A district court decision in the case *Geosyntec Consultants, Inc. v. United States*, 2013 BL 398422, No. 12-80334 (S.D. Fla. 2013), provides further support for taxpayers who claim fixed-price contract expenses. In *Geosyntec*, the court held, via a summary judgment, that research expenses incurred by a taxpayer under its fixed-price contracts weren’t “funded research” under Section 41 and were eligible for the research credit.

Facts: *Geosyntec* is a consulting and engineering firm specializing in the environment, natural resources and geologic infrastructure. The firm enters into the following types of contracts with its customers:

- fixed-price, including milestone payment arrangements, where *Geosyntec* performs work for a fixed total price specified at the outset;
- capped cost-plus, where *Geosyntec* is paid for labor and other expenses, plus a markup, subject to an agreed-upon maximum; and
- cost-plus, where *Geosyntec* is paid for all time and material costs incurred during the project.

Geosyntec filed suit seeking a tax refund of approximately \$1.6 million for qualified research expenses it incurred between 2002 and 2005. As the client assumes the economic risk under cost-plus contracts, *Geosyntec* agreed with the government that such contracts don’t qualify for the Section 41 credit. Therefore, only fixed-price and capped cost-plus contracts were at issue in this proceeding.

Additionally, at the request of the parties, the court didn’t consider the retention of substantial rights under these contracts, but instead limited its analysis to which party bore the economic risk under the contracts’ payment terms. To expedite the proceedings, the parties agreed to present six representative contracts to the court for review. Three contracts were fixed-price contracts and three were capped cost-plus contracts.

Geosyntec asserted that the contract principles of risk allocation, including payment mechanisms, conditional acceptance terms and warranty provisions, placed the financial risk of failure on *Geosyntec*. Therefore, the research expenses weren’t funded.

The IRS argued that whether research is funded doesn’t turn on routine business risks or potential for fi-

nancial loss. Instead, the regulations contemplate only excess research costs (i.e., those costs above any funding received) as being unfunded. Further, the IRS contended that the ultimate goal of the contracts was irrelevant and because Geosyntec didn't guarantee success under the contracts, it would be paid for its work regardless of ultimate success.

'Geosyntec' Holding: The court relied on *Fairchild* in order to determine if payment to Geosyntec under each contract was contingent upon the successful development of a specified product or result. If payment is contingent, then Geosyntec bears the risk of failure and the contract costs are eligible Section 41 expenses. Whether Geosyntec was likely to succeed in performing the project isn't determinative.

The court found that Geosyntec was at risk under the fixed-price contracts, but not under the capped cost-plus contracts.

The court held that the "nature of fixed price contracts makes them inherently risky to contractors. Under these contracts, to the extent a contractor's performance is unsuccessful, the contractor must remedy the performance without additional compensation. Thus, these contracts generally place maximum economic risk on contractors who ultimately bear responsibility for all costs and resulting profit or loss" (*Geosyntec*, at page 8).

The court also held that capped cost-plus contracts aren't different enough from cost-plus contracts to move them into the "realm" of fixed-price contracts. The court decided that capped cost-plus contracts, which obligate clients to make payments for predefined tasks at predefined rates in accordance with a detailed project budget, place minimal risk on the contractor and are, therefore, funded research.

'Geosyntec' Court Case—Appeals Court. The Court of Appeals for the 11th Circuit in *Geosyntec Consultants, Inc. v. United States*, 2015 BL 21088, 776 F.3d 1330 (11th Cir. 2015), affirming the district court, found that Geosyntec wasn't eligible for research tax credits for research expenses incurred under two "capped contracts," because the research was funded by Geosyntec's clients. Under the contracts, Geosyntec was entitled to payment regardless of whether its research was successful, and thus Geosyntec didn't bear the financial risk of failed research.

Facts: Geosyntec settled with the Internal Revenue Service with respect to the fixed-price contracts, and appealed the district court ruling as to two of the capped contracts. For both those contracts, Geosyntec argued that it bore the costs of research and should be eligible for the research tax credit.

'Geosyntec' Holding: Geosyntec contended that the capped contracts should be treated as unfunded contracts under the *Fairchild* decision since Geosyntec faced substantial financial risk under the capped contracts because it would only be paid for expenses incurred, eliminating an opportunity to make a profit on the research should it come in under budget, and it bore the risk that its expenses would exceed the ceiling price for each contract.

Geosyntec further argued that the totality of the provisions contained in the contracts allocated to Geosyntec the financial risk of the failure of its research to produce the desired product or result—even if success

wasn't expressly mandated by the terms of either contract.

The 11th Circuit found Geosyntec's argument misplaced and said its cost-of-performance argument focused on the amount Geosyntec would be paid or the likelihood that its contracts would be profitable; neither of these factors was relevant in determining whether Geosyntec bore financial risk for purposes of the research tax credit analysis.

The court said the relevant inquiry was whether payment was contingent on success of the research. The court found that both contracts were funded contracts based on the fact that Geosyntec was entitled to payment under both the contracts regardless of success. Moreover, additional compensation was available in certain circumstances. Both of the examined contracts allowed for extra compensation for out-of-scope work or if Geosyntec was faced with unreasonable demands.

The totality of the provisions in the contracts didn't place the risk of failed research on Geosyntec, according to the court. Both of the contracts required Geosyntec to perform in accordance with the standard of care applicable to like professionals performing comparable services on the type of project contemplated by each of the contracts; Geosyntec's work was to be free from negligence, error and defects.

The court determined that because payment to Geosyntec wasn't contingent on the success of its research, Geosyntec didn't bear the financial risk of its own failure.

In both cases, the clients contracted to reimburse Geosyntec for labor and costs for pre-defined tasks at pre-defined rates. Neither contract provided that the clients were obligated to reimburse Geosyntec only if Geosyntec produced results that met the contracts' specifications. Under the contracts, Geosyntec was required to submit monthly invoices for services rendered, with no clause requiring the client's review and approval of Geosyntec's work prior to approval.

Under neither of the contracts examined was Geosyntec subject to quality assurance procedures akin to those in *Fairchild*, in which the contract made all work subject to inspection and testing prior to acceptance and provided that payment would be made only after acceptance.

The court determined that because payment to Geosyntec wasn't contingent on the success of its research, Geosyntec didn't bear the financial risk of its own failure, and the two capped contracts were funded by Geosyntec's clients. Therefore, Geosyntec wasn't eligible for research tax credits for research expenses incurred under those contracts.

Recent Developments

The federal R&D tax credit has been evolving ever since it was originally enacted and has always enjoyed broad bipartisan political support. Most recently, the Dec. 18, 2015, enactment of the Protecting Americans

From Tax Hikes (PATH) Act of 2015 (Division Q of Pub. L. No. 114-113) made the credit a permanent part of the tax code.

In addition to making the credit permanent, the PATH Act allows small businesses to take the R&D tax credit against their alternative minimum tax (AMT) for any qualified company with less than \$50 million in gross receipts and allows startup businesses with gross receipts of less than \$5 million to take the R&D tax credit against their payroll taxes (essentially making it a refundable credit for up to five years).¹⁰ Both of these changes are effective for taxable years beginning after Dec. 31, 2015.

Qualified companies doing a cost-benefit analysis should consider that most states also offer their own R&D tax credits, which require similar documentation to the federal credit, thereby significantly increasing the benefits side of the equation.

Before the PATH Act made the credit permanent, the Tax Increase Prevention Act of 2014 (the 2014 Act), which was signed into law by President Barack Obama Dec. 19, 2014, retroactively reinstated the federal R&D credit for the one-year period beginning Jan. 1, 2014, through Dec. 31, 2014. Previously, the American Taxpayer Relief Act of 2012 (the 2012 Act), signed into law by President Obama Jan. 2, 2013, also included two significant modifications to the R&D credit.

First, the 2012 Act modified the treatment of acquisitions and or dispositions. Under the 2012 Act, a taxpayer acquiring a trade or business prorates the target's QREs, gross receipts and related base-period impact based on the number of days from the time of acquisition through the end of the controlled group's tax year. The 2012 Act provides for similar treatment in the event of the disposition of a trade or business.

Second, the 2012 Act modified the method by which the R&D credit is allocated to the members of a controlled group of corporations (any two or more corporations connected through a common stock ownership percentage of at least 80 percent). Prior to the 2012 Act, there were two different allocation methods based on the ratio of the stand-alone credit to the group credit, and the ratio of stand-alone qualified research expenses to group QRE. The proper method to use depended on the amount of the group credit as compared to the sum of the stand-alone credits. Under the 2012 Act, regardless of the amount of the group credit as compared to the sum of the stand-alone credits, the R&D credit allocable to the member of a controlled group is the proportionate basis to its share of the aggregate of the QREs.

The Treasury Department and the IRS in September 2013 proposed taxpayer-friendly regulations (REG-124148-05) that would amend the Internal Revenue Code Section 174 definition of "research and experimentation" (also known as R&D) expenditures. Under the guidance provided in Section 174, taxpayers are allowed to either currently deduct R&D expenditures as they are paid or incurred, or treat them as deferred expenses amortizable over a period of not less than 60 months.

The existing regulations provide that a determination of whether costs qualify as R&D expenditures depends on whether the costs are required R&D expenses critical to activities intended to discover information that

would eliminate uncertainty. The IRS is now proposing that if expenditures do qualify as R&D expenditures during the course of the development effort, it will no longer matter if the resulting product is ultimately sold or is used in the taxpayer's trade or business.

In an earlier positive research credit development, the IRS announced in August 2012 that it would no longer use the "tiered issue process" to determine exam priorities and address corporate tax issues, freeing the R&D tax credit from its historical designation as a Tier I audit issue. This designation has long discouraged companies from utilizing the credit for fear of increased audit scrutiny. Now the level of compliance risk should be less of a concern for qualified companies wanting to pursue R&D tax credits.

Additionally, a taxpayer can submit a pre-filing agreement application with the IRS in order to request consideration of an R&D tax credit issue before the tax return is filed and thus resolve potential disputes and controversy earlier in the examination process. The effect of the program is to reduce the cost and burden associated with the post-filing examination, to provide a desired level of certainty regarding a transaction and to make better use of taxpayer and IRS resources. Detailed information about the pre-filing agreement application process can be found in Revenue Procedure 2001-22.

Effective June 3, 2014, the IRS allows companies to go back and claim R&D tax credits on amended returns using the ASC methodology for all open tax years.

Government officials, knowing that innovation is critical to any company's success and to overall U.S. economic growth, have legislated alternative calculation options over the years to encourage U.S. companies to invest in research and development and to make the credit more valuable and obtainable. The alternative simplified credit (ASC) is the most recent example, removing complications inherent in prior calculation methods and easing the documentation burden of the R&D tax credit significantly.

The IRS has recently removed a long-standing restriction limiting the ASC election to originally filed returns. Effective June 3, 2014, the IRS allows companies to go back and claim R&D tax credits on amended returns using the ASC methodology for all open tax years. This will significantly ease some record-keeping and documentation requirements, which have prevented companies from claiming their research credits in prior years. However, the Section 280C election for a reduced credit must still be made on a timely filed return.

Packaging Industry Examples of Qualifying And Non-Qualifying R&D Activities

Qualifying R&D activities as they apply to the packaging industry fall within four general buckets—new product development, incremental product improve-

¹⁰ Holtzman, Yair, "Permanent R&D Tax Credit a Game Changer for America's Businesses" (09 DTR J-1, 1/14/16).

Credit Formulas to Consider

The tax code provides alternatives for calculating R&D credits, as follows:

■ **Regular (Traditional) Credit:** Regular Credit = 20 percent of the smaller of ((Current Qualified Research Expenditures – Base Period Amount) or (50 percent of Current QRE)) + 20 percent (Current Payments to Universities – Base Period Amount); Base Period Amount = Fixed Base Percentage X Average of the Prior Four Years' Gross Receipts.

■ **Alternative Simplified Credit:** ASC = (Current Year QRE – (Average of Previous Three Years' QRE X 50 percent)) X 14 percent.

■ **Section 280C(c)(3) Reduced Credit (ASC):** ASC = (Current Year QRE – (Average of Previous Three Years' QRE X 50 percent)) X 9.1 percent.

■ **Section 280C(c)(3) Reduced Credit (Regular):** Regular = 13 percent of the smaller of ((Current QRE – Base Period Amount) or (50 percent of Current QRE)) + 13 percent of (Current Payments to Universities – Base Period Amount).

ment, new process development and incremental process improvement.

Note: New or incremental mean as related to an individual company, not the industry or the world. Specific activities that are examples of qualifying research activities include:

- developing new or improved packaging materials or compounds;
- developing unique packaging designs, prototyping and conducting pilot line trials, regardless of success or failure;
- experimentation with scale-up processes; and
- modification of production techniques and processes to increase yields, reduce waste, improve product performance or make other improvements to the efficiency of the manufacturing operation.

Additional examples of qualifying activities include:

- design and development of new products, particularly products that are more effective, have increased functionality, offer better performance or longer shelf life, or contain larger amount of recyclable material;
- research of new applications for existing product designs;
- testing for compliance with domestic or foreign regulatory requirements;
- design, development and implementation of new production methodologies;
- improvement of manufacturing or production technologies, processes, techniques or procedures to in-

crease yield, reduce waste and byproducts, improve safety, improve energy efficiency or comply with regulatory requirements;

- design and development of scaled-up manufacturing processes;
- development of prototype pilot batches of new product candidates for testing and validation;
- implementation of automated processes or robotics to increase production efficiency;
- software development or information technology initiatives related to product or process improvements; and
- research to receive International Organization for Standardization certifications or other similar certifications.

Examples of activities that won't qualify for purposes of the R&D credit include¹¹:

- routine testing or inspection activities for quality control;
- development related purely to aesthetic properties of a product or packaging;
- testing and qualification of production lines;
- production line modifications that don't involve technical uncertainty, i.e. trouble shooting involving detecting faults in production equipment or processes;
- market research for advertising or promotions;
- routine data collections;
- research conducted outside the U.S., Puerto Rico or any possession of the U.S.;
- research that is funded by a third party other than the taxpayer; and
- any other activities that don't meet all of the four tests previously outlined.

Case Studies

The following are two packaging company case studies that further illustrate the types of projects and activities that will potentially qualify for the R&D tax credit. The eligibility of specific activities and expenditures will depend upon a closer examination of the facts and circumstances in relation to applicable guidance.

Case Study One—Process Improvement. Company developed alternative sealant structures to obtain productivity savings. Prior to this development effort, the development team was concerned with OEE at one of their packaging lines and faced uncertainty at the start of the project on how to improve the process.

After research with internal and external experts, the team determined that efficiencies could be realized through a combination of development of enhanced sealant structures and customization of the packaging line would provide the optimal OEE to barrier-specific flexible films. The development involved substantial design work in order to develop the optimal sealant struc-

¹¹ I.R.C. Section 41(d)(4).

ture and prototyping to optimize the production process.

After extensive analysis of the expenditures and activities involved in this project, it was determined to qualify for purposes of the R&D tax credit.

Case Study Two—New Product Development. Company undertook a project to develop a locking sift-proof box opening. Normally, containers have a tear strip that allows a slit formed along the container sidewalls or an addition of a plastic pour spout to the container. However, these solutions are ineffective as they are either difficult to pour from or tremendously increase the cost of the container. The goal of the project was to provide users a more convenient package without increasing its cost.

The company developed an opening with a flap pivotally attached to an upper side wall via a flap hinge that didn't cause an inconvenience to the customer while lowering the overall cost of the package. Substantially all of the activities involved in this project were technological in nature and relied on engineering.

After extensive analysis of the expenditures and activities involved in this project, it was determined to qualify for purposes of the R&D tax credit.

Calculating the R&D Tax Credit

There are two standard methods of calculating the Section 41 R&D tax credit. The credit is reported on Form 6765, Credit for Increasing Research Activities, and is included with the tax return.

The methods for calculating the credit are a traditional "regular credit" and the alternative simplified method¹². Under the traditional method, the credit is 20 percent of the smaller of the current-year qualified research expenses in excess of a base amount or 50 percent of the current-year qualified research expenses. One of the factors used in the calculation of the base amount is historical qualified research expenses. Using the traditional method, some taxpayers are required to determine their qualified research expenses for years as far back as 1984.¹³

The ASC is 14 percent of the current-year qualified research expenses in excess of 50 percent of the average qualified research expenses for the three tax years preceding the tax year for which the credit is being determined. Since the ASC only requires examination of expenses in the credit year and for the prior three years, it is a less burdensome method of computation. As such, companies that haven't claimed the research credit in the past or that may have difficulty determining their historical qualified research expenses may find the ASC to be more beneficial, despite the difference in the applied percentage.

Alternative Simplified Credit

ASC = (Current Year QRE – (Average of Previous Three Years' QRE 50 percent)) X 14 percent.

Regular (Traditional) Credit

Regular Credit = 20 percent of the smaller of ((Current QRE – Base Period Amount) or (50 percent of Cur-

rent QRE)) + 20 percent (Current Payments to Universities – Base Period Amount).

Base Period Amount = Fixed Base Percentage X Average of the Prior Four Years' Gross Receipts.

Reduced Credit

If the special election is made under I.R.C. Section 280C(c)(3), the amount of the allowable credit is determined as follows:

■ **ASC Method:** ASC = (Current Year QRE – (Average of Previous Three Years' QRE X 50 percent)) X 9.1 percent.

■ **Regular Method:** Regular = 13 percent of the smaller of ((Current QRE – Base Period Amount) or (50 percent of Current QRE)) + 13 percent of (Current Payments to Universities – Base Period Amount).

Conclusion

The packaging industry has experienced a dramatic metamorphosis over the past decade. For a company to survive and succeed in this shifting paradigm, companies need to focus their strategic thinking on four critical areas—optimizing manufacturing operations, integrating the use of new technologies, developing novel strategies related to product development and, lastly, sustainability.

Packaging manufacturers can address the cost and risk of research and development by leveraging the aforementioned federal, state and local tax incentives. Businesses that have so far not taken advantage of the R&D tax credit have a huge opportunity for improved financial performance.

The R&D tax credit applies to an enormous range of employee activities for companies of all sizes. Many activities that most packaging companies engage in on a regular basis can potentially qualify for the credit. It continues to be underutilized by qualified companies and their business management teams primarily due to misunderstandings of qualification and documentation requirements, fear of triggering IRS audits and the perception of the credits as being limited in scope or fleeting in nature due to their persistent short renewal periods.

The R&D tax credit is an important competitive factor for packaging manufacturers as it can lower the effective tax rate and refuel R&D efforts through increased cash flow. Packaging developers and manufacturers are constantly working on creating new products, improving quality and developing new functionality for existing products. While claiming the credit requires time, resources and expertise, it can also provide significant monetary and operational benefits to businesses. Even companies currently operating at a loss may benefit because federal R&D credits generated but not used can be carried back one year and forward up to 20 years creating an opportunity when the company becomes profitable.

The R&D credit has proven to be a powerful incentive, often providing a hidden source of cash from prior years' expenses while also serving to significantly reduce current and future years' federal and state tax liabilities. The R&D credit can also be a tool for refueling a company's R&D efforts.

Planning ahead by creating an infrastructure that identifies qualifying research activities and collects con-

¹² I.R.C. Section 41(c)(5).

¹³ I.R.C. Section 41(c)(3).

temporaneous documentation is essential to reducing future tax liabilities and generating an R&D tax credit that will be sustainable on IRS audit examination. It is worthwhile for companies in the packaging industry to

examine their internal processes and evaluate whether they might benefit from these generous research credits.