

INTERNAL REVENUE SERVICE  
NATIONAL OFFICE TECHNICAL ADVICE MEMORANDUM

March 4, 1999

Index Number: 174.00-00  
Number: **199927001**  
Release Date: 7/9/1999  
Control Number: TAM-118277-98  
CC:DOM:P&SI:B7  
Taxpayer's Name:  
Taxpayer's Identification Number:  
Taxpayer's Address:

Years in Issue:  
Date of Conference:  
District Director:

LEGEND:

Taxpayer:

a:

e:

ISSUE:

Are Taxpayer's costs attributable to the construction of molds and other tooling used in the manufacture of plastic injection molded products deductible as research and experimental expenditures under I.R.C. § 174 if those costs are related to the construction of property that is subject to an allowance for depreciation.

CONCLUSION:

Taxpayer's costs attributable to the construction of molds and other tooling used in the manufacture of plastic injection molded products are not deductible as research and experimental expenditures under § 174 because the costs are for the component material, labor and other elements involved in the construction of depreciable property in the manufacturing of products by Taxpayer for its customers.

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FACTS:

Taxpayer is in the trade or business of manufacturing plastic injection molded products (Products) for customers from a variety of different industries, including the automotive, consumer electronics, medical products, and appliances industries. The Products that Taxpayer manufactures are components of final products the customer produces for sale to consumers.

In order to manufacture the Products, Taxpayer must first design and construct a plastic injection molding die, or “mold.” The molds then are used to manufacture the Products for the customer. Normally, the customer will furnish Taxpayer with engineering drawings and specifications for the desired Product. Occasionally, however, the customer will furnish only the “concept” of the Product. In these cases, Taxpayer must produce the drawings and specifications from which it designs and constructs the mold, and thereafter manufactures the Product.

Based upon its estimate of anticipated costs to design and construct the mold, Taxpayer will enter into a contract with the customer to develop the mold, together with other tooling, as well as to manufacture the desired Product. Under the terms of the contract, Taxpayer is entitled to payment only if Taxpayer successfully designs and builds the mold, and the customer accepts the sample Products produced from the mold. Consequently, the design and development of the mold are at Taxpayer’s risk.

Once Taxpayer constructs the mold and the customer accepts the mold, title to the mold and other tooling shifts to the customer. The mold generally remains in the possession of Taxpayer for the manufacture of the Products; risk of loss or damage, however, remains with the customer. The customer has the right to remove, at any time, the mold and other tooling Taxpayer uses in the manufacture of the Products. If the customer removes from Taxpayer’s site any tooling (which includes the mold) prior to the completion of the manufacturing contract, however, it is liable for an additional fee equal to 30 percent of the cost to develop the mold.

Generally, Taxpayer will design as well as construct the mold in-house. In the event, however, that Taxpayer is unable to construct the mold in-house, it will enter into a contract with a third-party toolmaker which will build the mold based upon Taxpayer’s design and specifications. The third-party toolmaker will be paid only if the mold is constructed precisely in accordance with Taxpayer’s design specifications. The third-party toolmakers do not guarantee, however, that the mold will perform to the customer’s specifications and produce the desired Product. Thus, to the extent that the design and development of the mold are at Taxpayer’s risk, Taxpayer must incur additional costs to modify the mold and its design until the mold produces parts acceptable to the customer.

For taxable years a through e, Taxpayer filed a formal claim for refund for research credits and deductions attributable to the design, development and construction of the mold. At

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issue in this request for technical advice are deductions under § 174 for costs attributable to the construction of the mold and other tooling.<sup>1</sup>

LAW:

Section 174(a) provides that a taxpayer may treat research or experimental expenditures which are paid or incurred by him during the taxable year in connection with his trade or business as expenses which are not chargeable to capital account. The expenditures so treated shall be allowed as a deduction. Section 174(c) provides, in relevant part, that § 174 will not apply to any expenditure for the acquisition or improvement of land, or for the acquisition or improvement of property to be used in connection with the research or experimentation and of a character that is subject to the allowance under § 167 (relating to allowance for depreciation, etc.).

In 1994, the Service published final amendments to § 1.174-2 to clarify the definition of research or experimental expenditures. The regulations as amended apply to taxable years beginning after October 3, 1994. Because the 1994 amendments merely clarify the existing definition of research or experimental expenditures, however, return positions for years prior to October 4, 1994 that are consistent with the amendments will be recognized as consistent with the final regulations in effect for those years.

Section 1.174-2(a)(1) defines the term “research or experimental expenditures” as expenditures incurred in connection with the taxpayer’s trade or business which represent research and development costs in the experimental or laboratory sense. The term generally includes all such costs incident to the development or improvement of a product. Section 1.174-2(a)(1) further provides that expenditures represent research and development costs in the experimental or laboratory sense if they are for activities intended to discover information that would eliminate uncertainty concerning the development or improvement of a product. Uncertainty exists if the information available to the taxpayer does not establish the capability or method for developing or improving the product or the appropriate design of the product.

Section 1.174-2(a)(2) provides that the term “product” includes any pilot model, process, formula, invention, technique, patent, or similar property, and includes products to be used by the taxpayer in its trade or business as well as products to be held for sale, lease, or license.

Section 1.174-2(a)(8) provides that the provisions of § 1.174-2 apply not only to costs paid or incurred by the taxpayer for research or experimentation undertaken directly by the taxpayer but also to expenditures paid or incurred for research or experimentation carried on in the taxpayer’s behalf by another person or organization. However, any expenditures for research

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<sup>1</sup> This technical advice memorandum will not address the issue of whether costs attributable to the design, development and construction of the mold and other tooling qualify for the research credit under § 41.

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or experimentation carried on in the taxpayer's behalf by another person are not expenditures to which § 174 relates, to the extent that they represent expenditures for the acquisition or improvement of land or depreciable property, used in connection with the research or experimentation, to which the taxpayer acquires rights of ownership.

Section 1.174-2(a)(9) illustrates the application of § 1.174-2(a) with the following examples. In Example (1), A engages B to undertake research and experimental work in order to create a particular product. B will be paid annually a fixed sum plus an amount equivalent to his actual expenditures. In 1957, A pays to B in respect of the project the sum of \$150,000 of which \$25,000 represents an addition to B's laboratory and the balance represents charges for research and experimentation on the project. It is agreed between the parties that A will absorb the entire cost of this addition to B's laboratory which will be retained by B. A may treat the entire \$150,000 as expenditures under § 174.

In § 1.174-2(a)(9), Example (2), X Corporation, a manufacturer of explosives, contracts with the Y research organization to attempt through research and experimentation the creation of a new process for making certain explosives. Because of the danger involved in such an undertaking, Y is compelled to acquire an isolated tract of land on which to conduct the research and experimentation. It is agreed that upon completion of the project Y will transfer this tract, including any improvements thereon, to X. Section 174 does not apply to the amount paid to Y representing the costs of the tract of land and improvements.

Section 1.174-2(b) contains rules relating to certain expenditures with respect to land and other property. Section 1.174-2(b)(1) provides that expenditures by the taxpayer for the acquisition or improvement of land, or for the acquisition or improvement of property which is subject to an allowance for depreciation under § 167, are not deductible under § 174, irrespective of the fact that the property or improvements may be used by the taxpayer in connection with research or experimentation. However, allowances for depreciation of property are considered as research or experimental expenditures, for purposes of § 174, to the extent that the property to which the allowances relate is used in connection with research or experimentation. If any part of the cost of acquisition or improvement of depreciable property is attributable to research or experimentation (whether made by the taxpayer or another), see § 1.174-2(b)(2), (3), and (4).

Section 1.174-2(b)(2) provides, in relevant part, that expenditures for research or experimentation which result, as an end product of the research or experimentation, in depreciable property to be used in the taxpayer's trade or business may, subject to the limitations of § 1.174-2(b)(4), be allowable as a current expense deduction under § 174(a).

Section 1.174-2(b)(3) provides, in relevant part, that if expenditures for research or experimentation are incurred in connection with the construction or manufacture of depreciable property by another, they are deductible under § 174(a) only if made upon the taxpayer's order and at his risk. No deduction will be allowed (i) if the taxpayer purchases another's product

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under a performance guarantee (whether express, implied, or imposed by local law) unless the guarantee is limited, to engineering specifications or otherwise, in such a way that economic utility is not taken into account; or (ii) for any part of the purchase price of a product in regular production. However, see § 1.174-2(b)(4).

Section 1.174-2(b)(4) provides that the deductions referred to in § 1.174-2(b)(2) and (3) for expenditures in connection with the acquisition or production of depreciable property to be used in the taxpayer's trade or business are limited to amounts expended for research or experimentation. Thus, amounts expended for research or experimentation do not include the costs of the component materials of the depreciable property, the costs of labor or other elements involved in its construction and installation, or costs attributable to the acquisition or improvement of the property. For example, a taxpayer undertakes to develop a new machine for use in his business. He expends \$30,000 on the project of which \$10,000 represents the actual costs of material, labor, etc., to construct the machine, and \$20,000 represents research costs which are not attributable to the machine itself. Under § 174(a) the taxpayer would be permitted to deduct the \$20,000 as expenses not chargeable to capital account, but the \$10,000 must be charged to the asset account (the machine).

ANALYSIS:

The issue in this request for technical advice is whether costs attributable to the construction of molds and other tooling used in the manufacture of plastic injection molded products constitute research and experimental expenditures under § 174. It is Taxpayer's position that such costs are deductible under § 174 notwithstanding the limitations imposed by § 1.174-2(b)(2) and (4) because the molds are not depreciable property "in the hands of Taxpayer." Taxpayer suggests that because title to the property was transferred to the customer when the molds were completed and accepted, the property was used in the customer's trade or business rather than Taxpayer's trade or business even though Taxpayer used the molds to manufacture the Products for the customer. Taxpayer argues that the property was depreciable property in the hands of the customer and the costs to construct the depreciable property are deductible under § 174. It is our view, however, that such costs do not escape the limitations imposed by § 1.174-2(b)(2) and (4) because such property is of a character subject to an allowance for depreciation under § 167 regardless of which person, either Taxpayer or the customer, is entitled to claim the allowance for depreciation.

Section 174 provides that a taxpayer may treat research and experimental expenditures that are paid or incurred by him during the taxable year in connection with his trade or business as expenses that are not chargeable to capital account. Research and experimental expenditures are generally defined as expenditures incurred in connection with the taxpayer's trade or business which represent research and development costs in the experimental or laboratory sense but only so long as they are for activities intended to discover information that would eliminate uncertainty concerning the development or improvement of a product. Uncertainty exists if the

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information available to the taxpayer does not establish the capability or method for developing or improving the product or the appropriate design of the product.

Section 174 applies not only to costs attributable to research or experimentation undertaken directly by the taxpayer but also to expenditures paid or incurred for research or experimentation carried on in the taxpayer's behalf by a third person. Under certain circumstances, however, expenses attributable to research or experimentation undertaken either directly by the taxpayer or on behalf of the taxpayer by a third person will not be deductible under § 174. Specifically, research or experimental expenditures do not include expenditures for quality control testing; efficiency surveys; management studies; consumer surveys; advertising and promotions; the acquisition of another's patent, model, production or process; or research in connection with literary, historical, or similar projects. Section 1.174-2(a)(3). Moreover, research or experimental expenditures generally do not include expenditures attributable to the acquisition or improvement of property which is subject to an allowance for depreciation under § 167.

Section 1.174-2(a)(8) and the applicable examples at § 1.174-2(a)(9) address the factual scenario where expenditures are paid or incurred by the taxpayer for research or experimentation carried on in the taxpayer's behalf by a third person and a portion of the costs is attributable to land or depreciable property. In both Example (1) and Example (2), the taxpayer is the customer for whom a research contractor is performing research or experimentation. In Example (1), the taxpayer pays to the research contractor, B, the sum of \$150,000 of which \$25,000 represents an addition to the research contractor's laboratory. Because the contractor, and not the taxpayer, retains possession of the laboratory addition, the taxpayer is permitted to deduct the cost of the addition as a research and experimentation expenditure under § 174.

In Example (2), the research contractor is compelled to acquire a tract of land upon which to conduct research and experimentation for the taxpayer. The parties agree that upon completion of the project, the research contractor will transfer the land to the taxpayer. In this alternate scenario, because the taxpayer acquires ownership of the tract of land, the taxpayer is not allowed to deduct the cost of the land as a research and experimentation expenditure under § 174. Both examples serve to illustrate that ownership of land or depreciable property is determinative in factual scenarios where the research and experimentation is not performed by the taxpayer, but instead, by a third party contractor. See Rev. Rul. 73-20, 1973-1 C.B. 133; Rev. Rul. 69-484, 1969-2 C.B. 38. This is not the factual scenario of the case at hand where Taxpayer is the research contractor, and not the customer.

Section 1.174-2(b)(1) generally provides that a taxpayer's expenditures for the acquisition or improvement of property which is subject to an allowance for depreciation under § 167, are not deductible under § 174, irrespective of the fact that the property or improvements may be used by the taxpayer in connection with research or experimentation. Section 1.174-2(b)(2) provides, in relevant part, that expenditures for research or experimentation which

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result, as an end product of the research or experimentation, in depreciable property to be used in the taxpayer's trade or business may, subject to the limitations of § 1.174-2(b)(4), be allowable as a current expense deduction under § 174(a). Section 1.174-2(b)(4) provides that the deductions referred to in § 1.174-2(b)(2) and (3) for expenditures in connection with the acquisition or production of depreciable property to be used in the taxpayer's trade or business are limited to amounts expended for research or experimentation and do not include the costs attributable to the construction of the property.

Two types of expense are implicated by these rules: (1) expense incurred for activities intended to discover information that would eliminate uncertainty concerning the development or improvement of a product (§ 1.174-2(a)(1)); and (2) expense attributable to the component material, labor or other elements involved in the construction and installation of a product. The former type of expense, to the extent it can be traced to activities intended to discover information that would eliminate uncertainty concerning the development or improvement of a product, is deductible for purposes of § 174; the latter type of expense, to the extent it represents costs for the construction of a depreciable asset, is not deductible. *Cf.* Rev. Rul. 73-275, 1973-1 C.B. 134 (holding that costs attributable to the development and design of an automated manufacturing system, as distinguished from costs attributable to the production of the manufacturing system, are deductible under § 174).

Under the present facts, the expenditures in question are those attributable to the construction of the molds and other tooling. The parties in this case agree that the molds and other tooling are property of a character subject to the allowance for depreciation. It is Taxpayer's position, however, that such property is not subject to the limitations of § 1.174-2(b)(2) and (4) because the property is not depreciable property "in the hands of Taxpayer."

In fact, the plain meaning of the term "property of a character subject to the allowance for depreciation" refers to the character of the property, and not to whether it is depreciable in the hands of a particular taxpayer. The term has been widely construed to impose only three requirements: (1) that the property be subject to exhaustion, wear and tear or obsolescence; (2) that the property be used over a period of years; and (3) that the property be used in a trade or business or held for the production of income. *See* § 167(a). In a court-reviewed opinion, the Tax Court construed the term to mean property subject to exhaustion or wear and tear, decay, decline or exhaustion, and used in a taxpayer's trade or business. *See Noyce v. Commissioner*, 97 T.C. 670, 688-90 (1991). *See also Simon v. Commissioner*, 68 F.3d 41 (2d Cir. 1995), *aff'g* 103 T.C. 247 (1994) (court reviewed), *nonacq.* 1996-2 C.B. 2, and 1997-1 I.R.B. 6; *Liddle v. Commissioner*, 65 F.3d 329 (3d Cir. 1995), *aff'g* 103 T.C. 285 (1994) (court reviewed), *nonacq.* 1996-2 C.B. 2, and 1997-1 I.R.B. 6.<sup>2</sup> The Tax Court and other courts have construed equivalent

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<sup>2</sup> The Commissioner's nonacquiescence in both *Simon* and *Liddle* is limited to the § 167 requirements for a determinate useful life and reduction of basis for salvage value.

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language under other operative provisions of the Code to refer to the character or nature of the property, and have considered it irrelevant whether the particular taxpayer before the court is entitled to claim an allowance for depreciation. See, e.g., Lenz v. Commissioner, 101 T.C. 260 (1993); Arkla, Inc. v. United States, 37 F.3d 621 (Fed. Cir. 1994); Panhandle Eastern Pipe Line Co. v. United States, 228 Ct. Cl. 113, 654 F.2d 35 (1981); Oglebay Norton Co. v. United States, 221 Ct. Cl. 749, 610 F.2d 715 (1979). See also H. Rep. No. 97-201, at 118 (debating the research credit and the definition of “supplies” in 1981, Congress noted that “[p]roperty which is of a character subject to the allowance for depreciation is not eligible for the credit whether or not amounts of depreciation are deductible during the year and whether or not the cost of such property can be expensed.”). In sum, § 1.174-2(b) does not provide rules for determining which particular taxpayer is entitled to claim the allowance for depreciation. It is immaterial whether the constructed property constitutes depreciable property to Taxpayer or the customer because the ultimate owner of the property is neither determinative nor dispositive for purposes of the limitations in § 1.174-2(b) as long as the property is used in Taxpayer’s trade or business.

Section 1.174-2(b)(4) provides that the deductions referred to in § 1.174-2(b)(2) and (3) for expenditures in connection with the acquisition or production of depreciable property to be used in the taxpayer’s trade or business are limited to amounts expended for research or experimentation. Thus, amounts expended for research or experimentation do not include the costs of the component materials of the depreciable property, the costs of labor or other elements involved in its construction and installation, or costs attributable to the acquisition or improvement of the property. With respect to the present facts, Taxpayer states that it is not using the molds and other tooling in its trade or business in the manner contemplated by § 167 or § 174. Rather, Taxpayer contends that it is the customer that is using the molds and other tooling in its trade or business because the customer has title to this property. For purposes of evaluating Taxpayer’s eligibility for a deduction under § 174, however, there is little question under the facts that Taxpayer is using the molds and other tooling in its trade or business of manufacturing plastic injection molded products for customers. Therefore, it is our view that Taxpayer’s expenditures for the construction of the mold and other tooling are not deductible as research and experimental expenditures under § 174 because they are related to depreciable property used in the manufacturing of products by Taxpayer for its customers.

Except as specifically stated in this technical advice memorandum, we express or imply no opinion on the federal tax consequences of the transaction under the cited provisions of the Code or under any other provisions of the Code. Additionally, we express or imply no opinion

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on the federal tax consequences of alternative treatment under § 263 or § 263A. Finally, to the extent this technical advice memorandum is limited to the narrow question of whether the taxpayer is entitled to a deduction under § 174, we express or imply no opinion on the application of the depreciation rules under §§ 167 and 168. Further, we note that pursuant to § 4.01(14) of Rev. Proc. 99-3, 1999-1 I.R.B. 103, 110, the Service ordinarily will not issue a letter ruling or determination letter on the application of §§ 167 and 168 where the formal ownership of property is in a party other than the taxpayer except when title is held merely as security.

CAVEAT:

A copy of this technical advice memorandum is to be given to the taxpayer. Section 6110(j)(3) of the Code provides that it may not be used or cited as precedent.