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to: Deputy Area Counsel (Industry Programs)
LMSB Area 3, Retail, Food, Pharmaceuticals & Healthcare

from: Branch Chief, Branch 7, CC:ITA:7
(Income Tax & Accounting)

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subject: Classification of bioethanol plant

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LEGEND

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ISSUE

What is the appropriate Asset Class under Revenue Procedure 87-56 (1987-2 C.B. 674) to determine the depreciation deduction for the assets used by Taxpayer in an integrated facility for converting corn to bioethanol?

CONCLUSION

The appropriate depreciation classification for the assets used by Taxpayer in an integrated facility for converting corn (or other biomass) to bioethanol (or other solid, liquid, or gaseous fuel) is Asset Class 49.5, Waste Reduction and Resource Recovery

Plants, of Rev. Proc. 87-56. This conclusion is based on the plain language of that asset class description (including the specifications listed), the applicable definition of biomass, and the primary business activity and use of the facility being the conversion of biomass into a liquid fuel.

FACTS

Taxpayer operates a facility that produces ethanol (also known as ethyl alcohol), a colorless, flammable liquid with the chemical formula CH_3CH_2OH. Ethanol can be produced in one of two ways: (1) the synthetic production from hydrocarbon feedstocks, by the hydration of ethylene; and (2) the fermentation of starches released from milled biostocks. The fermentation process results in both beverage grade and fuel grade ethanol. It is the assets involved in this latter biological production of ethanol (bioethanol) at issue herein.

The primary business purpose for bioethanol is as an alternative fuel source to gasoline. Bioethanol is a high octane fuel source which burns cleaner and results in less greenhouse gases than that of gasoline. Bioethanol can be blended in ratios as high as 10% ethanol/90% gasoline (E10) as a vehicle fuel source with no modification to the engine. Some flexible fuel vehicles are now being produced that can run on E85 (85% ethanol/15% gasoline).

The units and process at Taxpayer's facility, referred to as a dry mill process, are as follows:

Corn is received and stored at the facility, awaiting grinding, where the corn kernel is ground into flour. Water is mixed with the corn flour, the temperature is increased, and enzymes added, which converts the corn flour starches to simple sugars. The resulting mash (water, sugars and non-convertible solids) are fed into fermentation tanks where yeast is added. Over a period of several days the yeast metabolizes the sugars into ethanol and CO_2. The CO_2 produced during fermentation may be collected, compressed, and sold as a by-product. However, Taxpayer does not do so in this case.

The ethanol content of the resulting solution will be in the range of 10-15% by volume. The solution is then sent to distillation to separate the ethanol from the solids and water. Distillation is a method of separating components based on boiling point differences. As ethanol boils at 178°F and water at 212°F, the vapor coming off the top of the distillation column will contain a higher ethanol content than the liquid being drawn off the bottom. This is a multi-step multi-column process. With the first column, solids leave the bottom of the column along with some water. This bottom stream is referred to as whole stillage, which will be processed separately into Dried Distillers Grain (DDG). The top of the column, with a much increased ethanol content, is sent to a second distillation column to further separate the ethanol and water. The overhead output from this second column will have an alcohol content of 96% (or 192 Proof). The ethanol content cannot be purified beyond this point through distillation.

It should be noted that the process described up to this point in the production of ethanol at the facility is basically the same as that in a distillery. From this point forward, the production of fuel grade ethanol and beverage grade ethanol differ. In a distillery, the overhead output would be sent to another distillation column to remove trace contaminants unfit for human consumption, while retaining the proof level. For fuel grade production, the overhead output would be further processed by dehydration to increase alcohol content to a higher proof (up to 100%, or 200 Proof). This is accomplished using molecular sieves, filters that separate the remaining water molecules from the ethanol.

Once the dehydration is complete, the fuel grade ethanol is denatured with 2-5% natural gasoline or unleaded gasoline. This denaturing is done for federal law purposes. The denatured ethanol is now sent to storage, to be transported from the facility by rail or truck. Taxpayer sells the fuel grade bioethanol to an ethanol marketer who in turn sells to petroleum marketers, blenders, or refiners. There are no sales of pre-denatured alcohol.

Meanwhile, the whole stillage derived from the initial distillation is sent to centrifuges to separate solids from liquid, then dried to form distillers grains (DG). The liquid from the centrifuges is either recycled back into the facility's production system or sent to evaporation. In evaporation, the water is separated from the corn solubles, the latter to be mixed with the DG, which is then used as an animal feed supplement in the dairy and beef industry.

For the financial year ending B, Taxpayer's facility produced approximately C gallons of ethanol that generated gross receipts of approximately $D, as well as approximately E tons of DG that generated gross receipts of approximately $F. Thus, more than 80% of the facility's economic output is represented by ethanol production. The prior financial year's results were similar.

For purposes of Federal tax as well as other than Federal tax, Taxpayer represents to governmental entities that it is in the business of producing ethanol fuel from biomass. Specifically, Taxpayer has claimed a federal income tax credit for "qualified ethanol production," described its business in filings as "renewable fuels production and development," received federal and state incentive payments for production of ethyl alcohol or bioenergy product from eligible agricultural commodities for blending with gasoline, and has registered with the U.S. Environmental Protection Agency as a ethanol fuel producer from renewable sources.

LAW AND ANALYSIS

Section 167(a) of the Internal Revenue Code provides a depreciation allowance for property used in a trade or business or held for the production of income. The depreciation deduction provided by section 167(a) for tangible property placed in

service after 1986 generally is determined under section 168. The classification of depreciable property subject to section 168 is determined under section 168(e) by reference to class life or by statute. The applicable recovery period for purposes of either section 168(a) or 168(g) is determined by reference to class life. Section 168(i)(1) provides that the term "class life" means the class life (if any) that would be applicable with respect to any property as of January 1, 1986, under former section 167(m) as if it were in effect and the taxpayer were an elector under that section. Former section 167(m) provided that the asset classes shall be by industry or other groups.

Former section 167(m) was added by section 109 of the Revenue Act of 1971 and was effective for property placed in service after December 31, 1970. In June 1971, the class life asset depreciation range (ADR) regulations were issued by Treasury. Treasury issued Announcement 71-76, 1971-2 C.B. 503, to explain the ADR regulations. The announcement provided in part at pages 507 & 514, as follows:

> The 1962 action [Rev. Proc. 62-21, 1962-2 C.B. 418] represented a fundamental change in concept because it permitted depreciation deductions based on "useful lives" determined by reference to industry-wide experience but substantially shortened from the experience shown by most of the taxpayers within an industry. It treated assets as a class, rather than as individual assets--as a stock of capital even though assets within a class were heterogeneous with respect to ages, useful lives, and physical characteristics. Assets within the class would have individual lives far longer and far shorter than the guideline class. For example, the category "office furniture and equipment," which includes items as diverse as desks and chairs and electronic computer, was established and given a single guideline life of 10 years. Similarly, broad industrial categories were given a single guideline life. For example, all manufacturing assets used in the "chemical and allied products" industry were given a guideline life of 11 years. All assets used in air transport, regardless of their nature, were grouped in a single class for which a guideline life of six years was established.
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> … ADR gears the annual depreciation allowance and the repair allowance to industry average lives and experience.
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> ….
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> … Taxpayers in a particular industry, competing in free markets, will tend to move toward similar production processes, will tend to use similar equipment, and will tend to retire equipment on similar schedules.
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> ….
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> Thus, ADR represents the Treasury Department's conclusion that a reasonable allowance for depreciation (including a reasonable allowance for obsolescence) need not necessarily be based on the taxpayer's individualized experience but may be based on industry-wide experience. The past experience

> of the particular taxpayer is not a better guide to the future period than the experience in the taxpayer's industry as a whole.

The Revenue Act 1971 (Revenue Act) was enacted in December 1971; both the House and Senate reports on the Revenue Act of 1971 referred to the then recently issued ADR regulations. Although the Revenue Act changed some aspects of the ADR regulations, for example, the three-quarter year convention was removed, the Senate and House Reports adopted the ADR asset classification methodology, which was named the class life system. The discussion of the class life system was as follows:

> Your committee is also concerned with the fact that at the present time there are in effect 3 systems for determining the useful life of property for depreciation purposes: the ADR system, the guideline lives, and the actual life of property to the taxpayer as determined on the basis of his own facts and circumstances. It appears to your committee that a desirable simplification of the depreciation rules would be achieved if the ADR system and the guideline lives were combined. Accordingly, your committee's bill provides for a class life depreciation system which is to replace both ADR and the guideline lives for property placed in service after 1970. In general, under the class life system, the Treasury Department is given authority to prescribe class lives based on anticipated industry norms (or norms based on other classes) and to permit taxpayers to elect the application of the system.
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> Prior actions.-- Before 1962, business firms depreciated their property in terms of useful lives that were established for several classifications of assets (so-called Bulletin 'F' lives). The guidelines lives for depreciable assets that were put into effect in 1962 consolidated assets into about 75 broad asset classes and also shortened the prescribed lives by up to 30 or 40 percent. The 1962 guidelines also established the use of industry classifications, as distinct from classifying assets by types of assets.
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> ….
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> Provision for class lives.-- The bill provides a unified system of class lives which may be elected by taxpayers for assets placed in service after 1970. A taxpayer which elects to determine the useful life of assets it acquires during a taxable year under this class life system must use the system for all assets acquired during the year which fall within any class for which the Treasury has established a class life. The Treasury may permit taxpayers to use a useful life for one or more classes of property which varies from the class life by up to 20 percent. (In determining the limitation of this variance, lives may be rounded to the nearest half year).
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> In prescribing the lives of property within a specified class, the Treasury is to determine a life which reasonably reflects the anticipated useful life of the class of property in question to the industry (in the case of an industry or sub-industry classification) or other group (in the case of an asset or other type of classification).

> Initially, it is intended that the new class lives will be the same as those prescribed by the 1962 guideline lives. As the Treasury Department collects and analyzes data regarding the useful life of property to taxpayers, it may adjust the class life it has prescribed in order to reflect in general the lives used by taxpayers in the 30th percentile. As previously indicated, this was in general the basis on which the guideline lives were established.
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> Under the class life system, the Treasury also may redefine or subdivide the classes of property both in order to provide a more reasonable classification for depreciation purposes and also as is required for the effective functioning of the new system. For example, a separate class could be established for used property and for foreign property.

(H. Rep. No. 533, 92st Cong., 1st Sess. 30, 32, 1972-1 C. B. 498, 514-515).

In response to the Revenue Act of 1971 and this legislative history, section 1.167(a)-11(b)(4)(ii) of the Income Tax Regulations provides that the asset classes are established in Rev. Proc. 72-10 or its successors. Section 1.167(a)-11(b)(4)(iii)(b) sets out the asset classification by placing assets in groups by primary activity of use. Property is included in the asset guideline class for the activity in which the property is primarily used. Property is classified according to its primary use even though the activity in which such property is primarily used is insubstantial in relation to all the activities of the taxpayer.

The current successor to Rev. Proc. 72-10 is Rev. Proc. 87-56, this revenue procedure sets forth the class lives of property that are necessary to compute the depreciation allowances under section 168. Rev. Proc. 87-56 establishes two categories of depreciable assets: (1) Asset Classes 00.11 through 00.4, which consist of specific assets used in all business activities (asset categories); and (2) Asset Classes 01.1 through 80.0, which consist of assets used in specific business activities (activity categories) based on broadly defined industry classifications. The activity categories correspond to the industry classification described in the legislative history of former section 167(m).

Rev. Rul. 2003-81, 2003-2 C.B. 126, in a discussion of classes of property under Rev. Proc. 87-56, provides that Asset Classes 01.1 through 80.0 consist of assets used in specific business activities based on broadly defined industry classifications. Rev. Rul. 2003-81 explains that all assets used in a particular industry classification, regardless of their nature, continue to be grouped into a single class (except for assets in Classes 00.11 through 00.4--the asset based classes (or activities) which are not relevant here).

For the years and assets in issue, Rev. Proc. 87-56 provides the following description of depreciable assets used in the following activities:

> Asset Class 28.0: Manufacture of Chemicals and Allied Products:

> Includes assets used to manufacture basic organic and inorganic chemicals; chemical products to be used in further manufacture, such as synthetic fibers and plastics materials; and finished chemical products. Includes assets used to further process man-made fibers, to manufacture plastic film, and to manufacture nonwoven fabrics, when such assets are located in the same plant in an integrated operation with chemical products producing assets. Also includes assets used to manufacture photographic supplies, such as film, photographic paper, sensitized photographic paper, and developing chemicals. Includes all land improvements associated with plant site or production processes, such as effluent ponds and canals, provided such land improvements are depreciable but does not include building and structural components as defined in section 1.48-1(e) of the regulations. Does not include assets used in the manufacture of finished rubber and plastic products or in the production of natural gas products, butane, propane, and by-products of natural gas production plants. (The class life is 9.5 years and the recovery period for purposes of section 168(a) (GDS recovery period) is 5 years.)
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> Asset Class 49.5: Waste Reduction and Resource Recovery Plants:
> Includes assets used in the conversion of refuse or other solid waste or biomass to heat or to a solid, liquid, or gaseous fuel. Also includes all process plant equipment and structures at the site used to receive, handle, collect, and process refuse or other solid waste or biomass to a solid, liquid, or gaseous fuel or to handle and burn refuse or other solid waste or biomass in a waterfall combustion system, oil or gas pyrolysis system, or refuse derived fuel system to create hot water, gas, steam and electricity. Includes material recovery and support assets used in refuse or solid refuse or solid waste receiving, collecting, handling, sorting, shredding, classifying, and separation systems. Does not include any package boilers, or electric generators and related assets such as electricity, hot water, steam and manufactured gas production plants classified in classes 00.4, 49.13, 49.221 and 49.4. Does include, however, all other utilities such as water supply and treatment facilities, ash handling and other related land improvements of a waste reduction and resource recovery plant. (The class life is 10 years and the GDS recovery period is 7 years.)

In order to determine which asset class Taxpayer's bioethanol facility falls into, it is necessary to determine whether bioethanol from corn is includable in Asset Class 49.5's citation of "conversion of … biomass ... to a … liquid … fuel," as well as determine which asset class most closely describes the primary use of Taxpayer's integrated bioethanol facility. Asset Class 49.5 specifically lists three alternative feedstocks for the conversion into fuel -- refuse, other solid waste, or biomass. In order to make the determination of whether bioethanol from corn is includable in Asset Class 49.5, it is appropriate to review the establishment of Asset Guideline Class 49.5 (predecessor to Asset Class 49.5 of Rev. Proc. 87-56).

Rev. Proc. 79-26, 1979-1 C.B. 566, established the new Asset Guideline Class 49.5 for assets used in waste reduction and resource recovery plants, formerly included in Asset Guideline Class 39.0, Manufacture of Athletic, & Jewelry and Other Goods, of Rev. Proc. 77-10, 1977-1 C.B. 548. See sections 1.04 and 1.05 of Rev. Proc. 77-10.

Specifically, Rev. Proc. 79-26 modified Rev. Proc. 77-10 by establishing a new Asset Guideline Class 49.5. This new class modifies the content of Asset Guideline Class 39.0. The description of assets included in Asset Guideline Class 49.5 of Rev. Proc. 79-26 include "assets used in the conversion of refuse or other solid waste or biomass to heat or to a solid, liquid, or gaseous fuel." The same language also appears in the description of assets included in Asset Class 49.5 (a successor to Asset Guideline Class 49.5) as set forth in Rev. Proc. 87-56. The revisions set forth in Rev. Proc. 79-26 are effective for property first placed in service in taxable years beginning after December 31, 1978.

It is necessary to address what is the definition of biomass for purposes of Asset Class 49.5. Neither Asset Guideline Class 49.5 in Rev. Proc. 79-26 nor Asset Class 49.5 in Rev. Proc. 87-56 provides a definition of the term "biomass".

Rev. Proc. 79-26 provides guidance as to the proper asset classification for purposes of depreciation (cost recovery) of investments in certain depreciable assets. Prior to, and subsequent to, the publication of Rev. Proc. 79-26, the Energy Tax Act of 1978 (Pub. L. 95-618, 92 Stat. 3174) (Energy Tax Act) and the Crude Oil Windfall Profit Tax Act of 1980 (Pub. L. 96-223, 94 Stat. 229) (Windfall Profit Tax Act), respectively, were enacted. Both Acts relate to an energy credit available for investments in specific categories of energy property, including alternative energy property that converts biomass, an alternate substance, into a synthetic liquid fuel.

For the period beginning October 1, 1978, and ending December 21, 1982, section 301(b) of the Energy Tax Act added a 10-percent credit for energy property (energy credit). For this purpose, the term "energy property" is defined by former section 48(l)(2)(A)(i) as meaning, among other things, alternative energy property. Under former section 48(l)(3)(A)(iii), the meaning of the term "alternative energy property" includes equipment for converting an alternate substance into a synthetic liquid, gaseous, or solid fuel. Former section 48(l)(3)(C) (later changed to being designated as former section 48(l)(3)(B), for periods after 1979) defines the term "alternate substance" as meaning any substance other than (i) oil and natural gas, and (ii) any product of oil and natural gas.

The Conference Report under the Energy Tax Act (S. Rep. No. 95-1324, 95th Cong., 2d Sess., p.63 (Conf. Rep.), 1978-3 C.B. (Vol. 2) 335), as it relates to alternative energy property, follows the House bill but modifies eligible equipment to include the Senate amendment (S. Rep. No. 95-529, 95th Cong., 1st Sess., p.75, 1978-3 C.B. (Vol. 2) 267) provision of "equipment for producing synthetic liquid, gaseous or solid fuel, but not coke or coke gas". Senate Report No. 95-529, at p.75, describes alternative energy

property as “specific types of equipment whose fuel or feedstock is an alternate substance, that is, a substance other than crude oil, shale oil, refined petroleum products, natural gas, geopressurized methane, and natural gas liquids.” The provision notes that examples of an alternate substance include “coal and agricultural or municipal wastes.” Also, under the heading “(4) *Production of synthetic fuel.*” at p. 75, the Senate Report lists equipment used to convert an alternate substance into a synthetic fuel as included in the definition of alternative energy property and notes that “this includes coal gasification and liquefaction and the production of synthetic fuel from biomass.”

Regulations (T.D. 7765) under former section 48(l) were published on January 19, 1981. Section 1.48-9(c)(2)(i) defines an alternate substance as “any substance or combination of substances other than an oil or gas substance” and describes alternate substances as including “coal, wood, and agricultural, industrial, and municipal wastes or byproducts.” Section 1.48-9(c)(5)(i) defines synthetic fuel production equipment (equipment that converts an alternate substance into a synthetic solid, liquid, or gaseous fuel (other than coke or coke gas)) as alternative energy property. Section 1.48-9(c)(5)(ii) describes a synthetic fuel as a fuel that differs significantly in chemical composition, as opposed to physical composition, from an alternate substance used to produce it and provides as an example of synthetic fuel, alcohol derived from vegetative matter, such as corn. Section 1.48-9(c)(5)(iii) provides that synthetic fuel equipment includes equipment that converts biomass to a synthetic fuel.

The Windfall Profit Tax Act was enacted on April 2, 1980. The Windfall Profit Tax Act added former section 48(l)(15), the definition of biomass property, to the Code. Former section 48(l)(15)(A)(i) amended former section 48(l)(3)(A)(iii) and limited the meaning of the term “alternate substance” in former section 48(l)(3)(B), for purposes of former section 48(l)(15). The definition of biomass property, for purposes of former section 48(l)(15)(A)(i), includes equipment for converting an alternate substance into (1) any synthetic solid fuel or (2) alcohol for fuel purposes if the primary source of energy for the facility producing the alcohol is not oil or natural gas or a product of oil or natural gas. See former sections 48(l)(15)(B)(ii) and (C). With respect to former section 48(l)(15)(A)(i)’s limitations to the meaning of the term “alternate substance”, the term “alternate substance” has the meaning given to such term by former section 48(l)(3)(B), except that such term does not include any inorganic substance and does not include coal or any product of such coal. See former section 48(l)(15)(B)(i). Qualified investment for equipment that converts biomass (which is defined by the term, alternate substance, as modified by former section 48(l)(15)(B)(i)) to alcohol for fuel purposes is eligible for the 10-percent energy credit from 1983 through 1985. See Conference Report under the Windfall Profit Tax Act (H. Rep. No. 96-817, 96th Cong., 2d Sess., p.132 (Conf. Rep.), 1980-3 C.B. 292). There are no regulations under former section 48(l)(15).

Under the Conference Report at p.132, 1980-3 C.B. 292, biomass means “generally any organic substance other than oil, natural gas, or coal, or a product of oil or natural gas

or coal" and is described as including waste, grain, wood, and oceanic and terrestrial crops and crop residues.

With this background, we can address the issue of what is the definition of biomass for purposes of Asset Class 49.5. Biomass is not defined in Asset Class 49.5 as set forth in Rev. Proc. 87-56 or in its predecessor, Asset Guideline Class 49.5 as set forth in Rev. Proc. 79-26, which modified Rev. Proc. 77-10. Rev. Proc. 87-56 and Rev. Proc. 79-26 provide guidance as to the proper asset classification for purposes of recovering the cost of investments in certain depreciable assets. Prior to, and subsequent to, the publication of Rev. Proc. 79-26, the Energy Tax Act and the Windfall Profit Tax Act were enacted, respectively. Both of these Acts relate to an energy credit available for investments in specific categories of energy property, including alternative energy property that converts biomass, an alternate substance, into a synthetic liquid fuel and both Acts address the definition of biomass.

Because both depreciation and the energy credit are based on the concept of the recovery of investment costs in equipment and the energy credit provisions were enacted near the time of the publication of Rev. Proc. 79-26, under these circumstances it is appropriate to rely on the definition of biomass as it is addressed in former section 48(l)(3) and former section 48(l)(15) in determining whether certain equipment is an asset used in the conversion of biomass to a liquid fuel for purposes of being classified in Asset Class 49.5.

Former section 48(l)(15)(B)(i) suggests that the term alternate substance, for purposes of former section 48(l)(15), has the same meaning as the term alternate substance, under section 48(l)(3)(B) (pre-section 48(l)(15)), subject to a certain exception. The exception is that the term "alternate substance" under former section 48(l)(15) (biomass) does not include any inorganic substance or coal or any product of coal. Clearly, that exception does not apply in the determination of whether corn is biomass for purposes of Asset Class 49.5 of Rev. Proc. 87-56.

The Conference Report, under the Windfall Profit Tax Act, defines biomass as meaning generally any organic substance other than oil, natural gas, or coal, or product of oil or natural gas or coal and describes biomass as including grain. A kernel of corn is a grain and is neither an inorganic substance nor oil, natural gas, coal, or a product thereof. Consequently, corn is described as biomass for purposes of former section 48(l)(15). Former section 48(l)(15)(B)(i) implies that the term "biomass", for former section 48(l)(15) purposes, should have the same meaning as the term "biomass", for former 48(l)(3) purposes (pre-section 45(l)(15)). Moreover, the legislative history and the regulations under former section 48(l)(3) suggest that the production of synthetic fuel from biomass and the production of synthetic fuel, alcohol derived from corn, are examples of the conversion of biomass, an alternate substance, into a synthetic fuel, for former section 48(l)(3) purposes.

Accordingly, in view of the foregoing, it follows that biomass, for purposes of Asset Class 49.5 of Rev. Proc. 87-56 (and its predecessor, Asset Guideline Class 49.5 of Rev. Proc. 79-26), includes corn. Consequently, the issue is whether Taxpayer's bioethanol facility falls under Asset Class 28.0 or Asset Class 49.5.

Rev. Rul. 77-63, 1977-1 C.B. 60, discusses whether the production of alumina by chemical processes precluded classification of the assets used to produce the alumina in Asset Class 33.2--Manufacture of Primary Nonferrous Metals. The chemical processes were part of the taxpayer's overall process of producing semi-finished and finished aluminum products from bauxite ore that the taxpayer mined. Asset Class 33.2 included assets used in the smelting, refining, and electrolysis of nonferrous metals from ore. The revenue ruling concluded that the chemical processes used to produce the alumina were an integral part of refining of the nonferrous metal. The revenue ruling further concluded that all of the assets used in the processing of the bauxite ore into primary aluminum (basic metal), including those used in the chemical processes to produce alumina, are classified in Asset Class 33.2. However, the revenue ruling also provided that assets used to process the alumina for use in activities other than those required to produce the basic metal should be classified in those other asset classes.

Recent appellate decisions in *Clajon Gas Co, L.P. v. Commissioner*, 354 F.3d 786 (8th Cir. 2004), *Saginaw Bay Pipeline Co. v. United States*, 338 F.3d 600 (6th Cir. 2003), and *Duke Energy Natural Gas Corp. v. Commissioner*, 172 F.3d 1255 (10th Cir. 1999), discuss the "primary use" standard of section 1.167(a)-11(b)(4)(iii)(b). These cases discuss a practical use-driven functional standard for assigning asset classification. It is the actual purpose and function of an asset that determines its asset class, rather the terminology used to describe an asset by its owners or others.

Asset Class 28.0 includes assets involved in the production of basic organic and inorganic chemicals, chemical products to be used in further manufacture and finished chemical products. Ethanol, whether from petroleum-based source or a grain-based source is an organic chemical (carbon containing). The individual, intermediate processes within the subject facility, particularly distillation and dehydration, may be similar to, or identical to, the processing steps that take place in the manufacture of chemicals. An essential step in both activities is the separation of a desired compound from other compounds. However, Taxpayer's activity at the subject facility of converting corn, a biomass, to bioethanol fuel fits the more specific language for the description of Asset Class 49.5. Rev. Rul. 77-63 shows that producing alumina by a chemical reaction as a step in the non-ferrous metal refining is not a Manufacture of Chemical (Asset Class 28.0) activity. Similarly, here, the conversion of corn, a biomass, to bioethanol, a liquid fuel, by chemical processes is likewise not a Manufacture of Chemical activity.

Further, in terms of the functional use of any of the individual processes, the product(s) of the process and the use of the product(s) determine whether the asset is used in the manufacture of chemicals or conversion of biomass to liquid fuel activity. Applying this

use-driven functional standard, the different processes, including the chemical processes, of the facility were dedicated to producing bioethanol fuel and were an integral part of this function. At the subject facility, the Taxpayer is engaged in only one economic driven industrial activity – producing bioethanol fuel from corn. Thus, the primary use of Taxpayer's subject facility is the production of liquid fuel from biomass.

Because this primary use meets the literal and plain language of the description of Asset Class 49.5, all of the assets used by Taxpayer in the subject facility for converting corn, a biomass, to bioethanol, a liquid fuel, are classified in Asset Class 49.5 of Rev. Proc. 87-56.

CASE DEVELOPMENT, HAZARDS AND OTHER CONSIDERATIONS

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