Internal Revenue Service

Department of the Treasury

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Person to Contact:

Telephone Number:

Refer Reply To:
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Date:
March 1, 2002

LEGEND:

Authority =

Company =

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Bonds =

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Dear

This letter is in response to your request for a ruling that the Project constitutes a

solid waste disposal facility within the meaning of § 142(a)(6) of the Internal Revenue Code.

Facts and Representations

You make the following factual representations. Company owns a plant (the "Plant") that produces ethanol. This production results in a waste known as "stillage." Because of environmental laws, the stillage cannot be dumped on the ground or into a waterway. Company is thus constructing the Project to process the stillage into cattle feed.

Stillage is a sludge with the consistency of oatmeal. The stillage is kept at a hot temperature to transport it through pipes because at ambient temperature the stillage does not readily flow and cannot be pumped like a liquid. If it were disposable, it would be disposed of in a landfill rather than as a water effluent.

No person is willing to purchase the stillage for any price in the form it is in when it is removed from the manufacturing process for input for the Project. Company is building the Project because it cannot find a person willing to take the stillage prior to its processing in the Project.

Authority is a political subdivision of State. Authority plans to issue the Bonds to finance costs of the Project. The Project consists of the components described below:

Centrifuge. The stillage is pumped through pipes to one of two centrifuges. The pump and pipes are used exclusively to move the stillage to the centrifuges. The centrifuges separate the stillage into "stillage cake" and "thin stillage." The stillage cake is then transported to the dryer (described below). Approximately S percent of the thin stillage is returned to the Plant's manufacturing process. This is done only to reduce the amount of thin stillage that must be disposed of, not because of any production benefit. Company would not process the stillage or build any portion of the Project for the purpose of recycling thin stillage. The Project does not include any pipes, pumps, or other assets that are used to transport thin stillage from the centrifuges to the manufacturing process. The remaining thin stillage is pumped to the evaporator (described below).

Specifically, the centrifuge portion of the Project consists of (i) the stillage pump, (ii) two centrifuges, (iii) a centrifuge conveyor, used solely to transport stillage cake from the centrifuges to the dryer, (iv) a thin stillage storage tank used to temporarily hold thin stillage removed from the centrifuges prior to being pumped to the evaporator, and (v) related pipes, valves, switches, and controls.

A small portion, expected to be less than T percent, of the stillage cake can be removed from the centrifuge and sold to a feed lot. A greater amount cannot be sold

because of the high transportation costs of the stillage cake compared to its usability as feed, and the speed with which the stillage cake spoils. Company will sell all of the stillage cake that any person will pay any price for. The Project does not include any asset that transports or otherwise handles the stillage cake that can be sold after it is removed from the centrifuge. Except for this portion of the stillage cake, the stillage does not reach a form in which it can be sold for any price at the place where it is located until it is in the form of DDGS (described below) removed from the dryer.

Evaporator. The evaporator is a steam powered system that processes the thin stillage into a thick material called “syrup” and separated wastewater. The syrup is pumped by a dedicated pump to the dryer. The steam used by the evaporator to process the stillage is supplied by a gas-fired boiler, which also supplies steam for the Plant’s manufacturing process. At least U percent of the steam produced by the boiler is expected to be used by the evaporator.

Specifically, the evaporator portion of the Project consists of (i) U percent of the cost of the gas-fired boiler, (ii) two heat exchangers, which allow heat to be transferred from the steam to the thin stillage, (iii) two evaporator recirculation pumps, used to recirculate the syrup until proper specifications are reached, (iv) a surge tank, used to temporarily hold the syrup before it is pumped to the dryer, (v) a syrup feed pump, used solely to pump the syrup from the evaporator to the dryer, and (vi) related pipes, valves, switches, and controls.

Dryer. The syrup and stillage cake are mixed and then put into a dryer drum in which the mixed material is heated to vaporize the remaining moisture. The material discharged from the dryer is known as distillers dried grain with solubles (“DDGS”). The DDGS is discharged from the dryer drum into a 4-cyclone air/production separation system, in which the DDGS is removed from the air in which it was dried. The DDGS is conveyed to an air pickup plenum, where it is cooled. After cooling, the DDGS is moved pneumatically to a dust collector, then into storage. The DDGS, as it is removed from the dryer and sent to the storage building, is for the first time in a form in which it may be sold as animal feed.

Specifically, the dryer portion of the Project consists of (i) a dryer feed conveyor, used to convey the stillage cake to the dryer, (ii) a mixer in which the cake and syrup are mixed, (iii) the dryer drum and its drive system, (iv) a gas-fired burner and combustion furnace used exclusively to supply heat to the dryer, (v) a dryer discharge conveyor system, used to convey the DDGS to the pneumatic conveyor, (vi) a recycle screw conveyor, which is used to convey a portion of the DDGS back into the dryer to enhance drying efficiencies, (vii) a 4-cyclone air/production separation system, (viii) a large induced draft fan, which pulls a draft on the dryer drum and discharges water vapor up the discharge stack in the form of steam, (ix) a stainless steel dryer discharge stack, which routes all steam away from the dryer, and (x) related pipes, valves, switches, and controls.

Storage. At least V percent of the space in a flat storage building is expected to be used for the storage of DDGS. On the average, the DDGS is stored in the storage building for no more than three days. The Project includes V percent of the cost of the storage building. In addition, the storage portion of the Project includes (i) a pneumatic conveyor system used to move the DDGS from the dryer exit conveyor to a cyclone dust collector, (ii) a cyclone dust collector, used to separate the DDGS from the air used to move it pneumatically, (iii) a screw stack conveyor, used to deliver the DDGS from the cyclone to the flat storage building, (iv) conveyors, elevator leg, weigh system, and related equipment used to handle, weigh, and load bulk DDGS onto trucks or rail cars, and (v) related pipes, valves, switches, and controls.

Methanators and Lagoons. As noted above, the evaporator produces wastewater. Approximately W percent of this wastewater is returned to the Plant's manufacturing process. This is done only to reduce the amount of wastewater that must be disposed of, and not for any production benefit. Company would not process the stillage or build any portion of the Project for the purpose of recycling the wastewater. The Project does not include any pipes, pumps, or other assets that are used to transport wastewater from the evaporator to the manufacturing process.

The wastewater not returned to the manufacturing process must be further treated in the methanator because its biological oxygen demand ("BOD") level prevents it from being discharged into a waterway without treatment. In the methanator, this wastewater is pumped to a holding tank, then to a digester and then to a decarbonator.

The digester produces biogas under certain circumstances. When biogas is produced, it is either used as fuel in the dryer (discussed above) or vented and flared off. But before the gas can be vented or used as fuel, it must be cleaned in a biogas scrubber. The biogas scrubber would be built the same size and at the same cost even if all of the biogas were vented to the atmosphere. In addition, the pipes and related assets that transport the gas from the biogas scrubber to the dryer are not part of the Project.

Wastewater removed from the methanator is pumped to lagoons for further treatment. Approximately X percent of the water treated by the lagoons is not derived from the methanator. The lagoons would be built in the same size and at the same cost even if only wastewater from the methanator portion of the Project was put in the lagoons.

Specifically, the methanator and lagoons portion of the Project consists of (i) W percent of the cost of both the distillate tank and the distillate pump, (ii) the digester, (iii) the biogas scrubber and the biogas flare that burns off the cleaned gas, (iv) the decarbonator, (v) the recycle tank, (vi) tanks, which store the "food" sources for the bacteria in the digester, (vii) an effluent pump, used solely to pump the wastewater from the methanator to the lagoons, (viii) the lagoons, including aeration pumps, and (ix)

related pipes, valves, switches, and controls.

Law and Analysis

Generally, interest on a private activity bond is not excludable from gross income under § 103(a) unless the bond is a qualified bond. Section 141(e) provides that a qualified bond includes any private activity bond that is an "exempt facility bond." Section 142(a) provides that the term "exempt facility bond" means any bond issued as part of an issue 95 percent or more of the net proceeds of which are used to provide certain exempt facilities. Section 142(a)(6) describes "solid waste disposal facilities" as exempt facilities.

Tax-exempt financing for solid waste facilities was permitted under § 103 of the Internal Revenue Code of 1954. Regulations were issued under that Code provision. In 1986, when Congress revised the tax-exempt bond provisions, it clarified that the regulations issued under the 1954 Code applied to § 142(a)(6). The House Report to the 1986 Act incorporates all of the present law to the extent not amended, while present law characterization of "solid waste disposal facilities" in the House Report expressly refers to the regulatory rules found in § 1.103-8(f)(2)(ii). H.R. Rep. No. 99-426, at 497, 518 (1985), 1986-3 C.B. (Vol. 2) 497, 518. The Conference Report states that "solid waste disposal facilities" is generally defined as under present law. H.R. Conf. Rep. No. 99-841, at II-704 (1986), 1986-3 C.B. (Vol. 4) 704.

Section 1.103-8(f)(2)(ii)(a) of the Income Tax Regulations provides, in part, that the term "solid waste disposal facility" means any property or portion thereof used for the collection, storage, treatment, utilization, processing, or final disposal of solid waste. Only expenditures for that portion of property that is a solid waste disposal facility qualify as expenditures for solid waste disposal facilities. Whether a collection or storage facility qualifies as a solid waste disposal facility depends upon all of the facts and circumstances. The term does not include facilities for collection, storage, or disposal of liquid or gaseous waste except where such facilities are facilities which are functionally related and subordinate to a solid waste disposal facility.

Section 1.103-8(a)(3) provides, in part, that an exempt facility includes any land, building, or other property functionally related and subordinate to the facility. Property is not functionally related and subordinate to a facility if the property is not of a character and size commensurate with the character and size of the exempt facility.

IS THE STILLAGE SOLID WASTE?

Section 1.103-8(f)(2)(ii)(b) provides, in part, that the term "solid waste" has the same meaning as in § 203(4) of the Solid Waste Disposal Act (42 U.S.C. § 3252(4)). Material will not qualify as solid waste unless, on the date of issue of the obligations issued to provide the disposal facility, it is property which is useless, unused, unwanted,

or discarded solid material which has no market or other value at the place where it is located. Thus, where any person is willing to purchase such property, at any price, such material is not waste. Section 1.103-8(f)(2)(ii)(b) further provides that § 203(4) of the Solid Waste Disposal Act provides that:

> the term "solid waste" means garbage, refuse, and other discarded solid materials, including solid-waste materials resulting from industrial, commercial, and agricultural operations, and from community activities, but does not include solids or dissolved materials in domestic sewage or other significant pollutants in water resources, such as silt, dissolved or suspended solids in industrial waste water effluents, such as silt, dissolved materials in irrigation return flows or other common water pollutants.

The stillage is received at the Project heated and in a semisolid or "sludge" form out of necessity; it is too solid to pump and handle in the Project at ambient temperature. If it were disposable, it would be disposed of in a landfill rather than as a water effluent. The stillage is not a dissolved or suspended solid in industrial waste water effluent. We conclude that it is solid. The stillage is also useless, unwanted, or discarded material that has no market or other value at the place where it is located. The Company is building the Project because it cannot find a person willing to take the stillage prior to its processing in the Project. We thus conclude that the stillage from the Plant is a solid waste for purposes of § 142(a)(6).

IS THE PROJECT A SOLID WASTE DISPOSAL FACILITY?

Section 1.103-8(f)(2)(ii)(c) provides, in part, that a facility which disposes of solid waste by reconstituting, converting, or otherwise recycling it into material which is not waste shall also qualify as a solid waste disposal facility if solid waste constitutes at least 65 percent, by weight or volume, of the total materials introduced into the recycling process.

Section 17.1(a) of the temporary regulations provides, in part, that in the case of property which has both a solid waste disposal function and a function other than the disposal of solid waste, only the portion of the cost of the property allocable to the function of solid waste disposal is taken into account as an expenditure to provide solid waste disposal facilities. A facility which otherwise qualifies as a solid waste disposal facility will not be treated as having a function other than solid waste disposal merely because material or heat which has utility or value is recovered or results from the disposal process. Where materials or heat are recovered, the waste disposal function includes the processing of such materials or heat which occurs in order to put them into the form in which the materials are in fact sold or used, but does not include further processing which converts the materials into other products.

Section 17.1(b) provides that the portion of the cost of property allocable to solid waste disposal is determined by allocating the cost of such property between the property's solid waste disposal function and any other functions by any method which, with reference to all of the facts and circumstances with respect to such property, reasonably reflects a separation of costs for each function of the property.

Section 17.1(c) provides the following example:

> Company A intends to construct a new facility to process solid waste that City X will deliver to the facility. City X will pay A a disposal fee for each ton of solid waste that City X dumps at the facility. The waste will be processed by A in a manner that separates metals, glass, and similar materials. As separated, some of the items are commercially saleable; but A does not intend to sell the metals and glass until the metals are further separated, sorted, altered, and cleaned, and the glass is pulverized. The metals and pulverized glass will then be sold to commercial users. The waste disposal function includes such processing of the metals and glass, but no further processing is included.
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> The remaining waste will be burned in an incinerator. Gases generated by the incinerator will be cleaned by use of an electrostatic precipitator. To reduce the size and cost of the electrostatic precipitator, the incinerator exhaust gases will be cooled and reduced in volume by means of a heat exchange process using boilers. The precipitator is functionally related and subordinate to disposal of the waste residue and is therefore property used in solid waste disposal. The heat can be used by A to produce steam. Company B operates an adjacent electric generating facility and B can use steam to power its turbine-generator. B needs steam with certain physical characteristics and as a result A's boilers, heat exchanger, and related equipment are somewhat more costly than might be required to produce steam for some other uses. The disposal function includes the equipment actually used to put the heat into the form in which it is sold.
>
> Company A intends to construct pipes to carry the steam from A's boiler to B's facility. When converted to such steam the heat is in the form in which sold, and therefore the disposal function does not include subsequent transporting of the steam by pipes. Similarly, if A installed generating equipment and used the steam to generate electricity, the disposal function would not include the generating equipment, since such equipment transports the commercially saleable steam into another form of energy.

Rev. Rul. 72-190, 1972-1 C.B. 29, involves facilities to reconstitute previously

discarded solid materials so that they can be reintroduced into a manufacturing process. The discarded solid materials had no value at the place where they were discarded. The ruling concludes that the facilities are solid waste disposal facilities eligible for tax-exempt bond financing.

Rev. Rul. 76-222, 1976-1 C.B. 26, involves the proposed issuance of solid waste disposal facility bonds to finance construction of a facility designed to process garbage into combustible and noncombustible fractions. The combustible fraction is fed directly from the operator's classifiers to a surge bin, from which it is blown into the boilers of the purchaser, a public utility. The public utility pays for the combustible fraction. The revenue ruling concludes that the facilities, including the surge bin but excluding the facilities used to transport the material from the surge bin to the boilers, qualify as a solid waste disposal facility.

The Project meets the requirements of §§ 1.103-8(f)(2)(ii)(a) and 1.103-8(f)(2)(ii)(c) because each component of the Project (other than the functionally related and subordinate facilities described below) is used to process the stillage, a solid waste, by reconstituting or converting it into a material, DDGS, that is not waste. The stillage constitutes at least 65 percent, by weight or volume, of the total materials introduced into this process.

The Project meets the requirements of § 17.1 because it includes only those assets that process the stillage in order to put it into the form in which it is in fact sold or used, but does not include any further processing. The Project consists of the four main components–the centrifuge, dryer, evaporator and methanator.

The centrifuge is used solely to process or treat solid waste and, accordingly, is part of a solid waste facility. The two products that result from the centrifuge are the thin stillage and the stillage cake.

Some of the thin stillage is expected to be pumped back into the manufacturing process to reduce the amount of thin stillage that needs to be disposed of. The thin stillage that is not pumped back into the manufacturing process is piped to the evaporator for further processing. The fact that some of the thin stillage is being reintroduced into the manufacturing process does not prevent the facility from qualifying as a solid waste facility. In Rev. Rul. 72-190, a facility that reconstituted solid materials so that they can be reintroduced into a manufacturing process qualifies as a solid waste disposal facility.

Section 17.1, however, provides that a solid waste disposal function includes the processing of waste and materials to put them into the form in which they are in fact sold or used, but does not include further processing. In this case, the assets that transport the thin stillage back to the manufacturing process will not be financed with the Bonds.

The evaporator separates the thin stillage into a syrup and wastewater. The syrup is sent to the dryer where it is mixed with the stillage cake and further processed. Of the wastewater produced by the evaporator, about W percent is piped back into the manufacturing process. The assets that are used to take the wastewater back to the manufacturing process will not be financed with the Bonds. For reasons similar to those noted in our discussion of the thin stillage above, we conclude that the reintroduction of the wastewater back into the manufacturing process does not prevent the facility from qualifying as a solid waste facility.

The boiler that produces heat for the evaporator will also be used for other purposes unrelated to solid waste disposal. Section 17.1 provides that in the case of property that has both a solid waste disposal function and another function, only the portion of the cost of the property allocable to the function of solid waste disposal is taken into account as an expenditure to provide solid waste disposal facility. The evaporator will use at least U percent of the heat produced by a gas-fired boiler. Correspondingly, the Bonds will finance U percent of the cost of the boiler.

The dryer will be used to mix the stillage cake and the syrup and produce the DDGS. Before processing in the dryer, a small portion (expected to be less than T percent) of the stillage cake will be sold to a feed lot. A greater amount cannot be sold because of the high transportation costs of the stillage cake compared to its usability as feed, and the speed with which the stillage cake spoils. The assets used to transport or handle the saleable stillage cake will not be financed with the Bonds. We conclude that the dryer is part of a solid waste disposal facility.

The wastewater produced by the evaporator that is not reintroduced into the manufacturing process must be further processed in the methanator and lagoons before being sent to the waterways. The methanator treats only wastewater generated from the evaporator. Except for a very small percentage (approximately X percent), all of the wastewater processed in lagoons is water from the solid waste processing. We conclude that the methanator and lagoons are of a size and character that is commensurate with the Project and that the methanator and lagoons are functionally related and subordinate to the solid waste disposal facility.

The methanator produces a gas that must be cleaned in a biogas scrubber before it can be vented or sent to the dryer for fuel. The size and character of the biogas scrubber is commensurate with the Project; we thus conclude that the biogas scrubber is functionally related and subordinate to the solid waste disposal facility.

The DDGS is ready for sale upon reaching the storage portion of the Project. The Authority anticipates using at least V percent of the storage building for storing DDGS. Correspondingly, the Bonds will finance V percent of the storage building. Whether a storage facility qualifies as a solid waste facility depends upon all of the facts and circumstances. For example, land and facilities for the collection of materials to

form a slag heap which is not preliminary to the recycling or other final disposal of such materials within a reasonable period of time will not qualify. § 1.103-8(f)(2)(ii)(a). The Authority anticipates that the DDGS will be stored in the facility for about three days. Based on the facts presented, we conclude that the storage facility is part of the solid waste facility.

Conclusion

We conclude that the Project is a solid waste disposal facility within the meaning of § 142(a)(6).

Except as expressly provided herein, no opinion is expressed or implied concerning the tax consequences of any aspect of any transaction or item discussed or referenced in this letter.

This ruling is directed only to the taxpayer(s) requesting it. Section 6110(k)(3) of the Code provides that it may not be used or cited as precedent.

In accordance with the Power of Attorney on file with this office, a copy of this letter is being sent to Authority.

Sincerely yours,
Assistant Chief Counsel
(Exempt Organizations/Employment Tax/
Government Entities)
By: Rebecca L. Harrigal
Chief, Tax Exempt Bond Branch