Repair and Maintenance of Plant Property: New Insights

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Atkinson explores the concept of plant property in the recent "repair regs" and provides helpful tips and suggestions for applying what likely will remain an inherently factual standard with few bright lines.

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Taxpayers in many industries such as traditional manufacturing; the production of oil, gas, and chemicals; mining; warehousing and distribution; and even many service industries confront a critical threshold question before applying the capitalization standards of the so-called repair regulations (T.D. 9564). In particular, companies now must determine whether they own plant property and if so, how to divide those assets into units of property for purposes of the repair regulations. Because the size of the taxpayer's units of property directly affects whether the costs of repairing and maintaining equipment may be immediately deducted as an expense or instead must be capitalized and recovered through depreciation, correctly analyzing the company's plant property is critical.

This article explores the new concept of plant property, including the limited guidance provided by the repair regulations as well as additional insights that can be gleaned from more recent industry-specific guidance. It also provides helpful tips and suggestions for applying what likely will remain an inherently factual standard with few bright lines.

A. Overview

Identifying the taxpayer's units of property is the first step in ensuring that the taxpayer identifies all the repair and maintenance expense deductions to which it is entitled. Larger units of property increase the likelihood that a particular maintenance activity will be a deductible repair rather than a capital improvement. Before the issuance of the repair regulations, that concept was largely driven by frequently conflicting case law that developed over many decades.[1] The repair regs have substituted a new definition of the term "unit of property" generally applicable to all non-building property.[2] For all but two categories of non-building property, the taxpayer's units of property are determined using the functional interdependence test. That standard is borrowed directly from the interest capitalization rules of section 263A(f) and reg. section 1.263A-10. That standard posits that two components are part of a single unit of property if the taxpayer's placing in service of one component is dependent on its placing the other component in service as well. For example, because neither can function without the other, an aircraft's engines and airframe combine to form a single unit of property — an airplane.[3]

If the temporary regulations had ended the analysis there, they would have created symmetry between units of non-building property for purposes of both sections 263(a) and 263A, ending the whipsaw situations that confronted many taxpayers before issuance of the repair regulations. For many

[1]*See, e.g.*, *Fedex Corp. v. United States*, 291 F. Supp.2d 699 (W.D. Tenn. 2003), *aff'd*, 412 F.3d 617 (6th Cir. 2005) (aircraft engines); *Smith v. Commissioner*, 300 F.3d 1023 (9th Cir. 2002), *aff'g Vanalco Inc. v. Commissioner*, T.C. Memo. 1999-265 (aluminum smelter); *Ingram Indus. Inc. v. Commissioner*, T.C. Memo. 2000-323 (tugboats); *Electric Energy v. United States*, 13 Cl. Ct. 644 (Cl. Ct. 1987) (power plant economizer); *Berkley Machine Works & Foundry Co. v. Commissioner*, T.C. Memo. 1977-177 (furnace shell); *Hawaiian Sugar Co. v. Commissioner*, 13 B.T.A. 683 (1928) (crusher roller in sugar mill); *Libby & Blouin Ltd. v. Commissioner*, 4 B.T.A. 910 (1926) (sugar evaporator).

[2]The repair regulations provide different standards for determining the units of property in the case of a building. Reg. section 1.263(a)-3T(e)(2).

[3]Reg. section 1.263(a)-3T(e)(6), Example 14.

types of non-building property, that will be true, but the regs create two important exceptions. First, the functional interdependence test does not apply to network assets such as electric transmission and distribution lines, telephone lines, pipelines, and railroad tracks. Instead, the repair regulations state that unless the government has provided industry-specific guidance for those assets (which it has done for some industries and is in the process of doing for others), the units of property for network assets are determined based on the taxpayer's facts and circumstances.[4]

This discussion focuses on the second exception: plant property. The consequence of labeling non-building property as plant property is that the functionally interdependent property has to be further divided into groupings according to discrete and major functions.[5] The repair regulations give relatively little guidance either in identifying plant property generally or in dividing its components into discrete and major functions. Recent guidance focusing on electric power plants, however, gives some insight into the government's current thinking and suggests that the IRS and taxpayers may have different views about the meaning of the phrase ''discrete and major function.''

B. Identifying Plant Property

Logically, the first step in this analysis is identifying the taxpayer's plant property. The repair regulations define plant property as: (1) functionally interdependent; (2) machinery or equipment (other than network assets); and (3) used to perform an industrial process, such as manufacturing, generation, warehousing, distribution, or automated materials handling in service industries.[6]

1. Functionally interdependent. The company must first identify the groupings of machinery or equipment that are functionally interdependent. That is the same standard that the repair regulations apply to all non-building property other than network assets. The regs seek to group together those assets that must be placed in service together.[7] For example, in applying the plant property concept to a commercial laundry, the repair regs describe the facility as having two identical lines, each composed of the same types of equipment, with each line performing the same overall task. The regulations conclude that each of those lines is a separate item of functionally interdependent equipment, to which the plant property standard is then applied.[8] As such, when a manufacturing or production facility has multiple, independent lines producing either the same or different products, each line generally would be treated as a separate unit for purposes of this analysis, with the plant property standard then applied separately to each of those initial units. The question will be whether the taxpayer could have constructed and operated the various lines independently, even if doing so would have been economically or operationally inefficient.[9]

Similarly, even when some machinery and equipment falls squarely within the industrial process category discussed below, not all machinery or equipment at that facility will become plant property that must be divided further into smaller units. Instead, only the functionally interdependent equipment performing that industrial process must be treated as plant property. Thus, for example, even if some automated ''pick and pack'' equipment in a warehouse or distribution facility is functionally interdependent, stand-alone equipment such as forklifts would not be included in that grouping, because they are not functionally interdependent with the conveyor belts, sorting equipment, etc. As such, the facility may contain both plant equipment that must be divided further into smaller units based on function, as well as other equipment falling under the general unit-of-property standard for non-building property.

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[4]Reg. section 1.263(a)-3T(e)(3)(iii). *See* Rev. Proc. 2011-43, 2011-37 IRB 326 (electric transmission and distribution property); Rev. Proc. 2011-28, 2011-1 C.B. 743 (telephone wireless assets); Rev. Proc. 2011-27, 2011-1 C.B. 740 (telephone wireline assets).

[5]The plant property concept originated in proposed regulations (REG-168745-03) issued in 2008, in which the government proposed an alternative to the factor-driven unit of property standard previously proposed (and widely criticized) in 2006. The preamble to the 2008 proposed regulations states only that in the case of some types of property ''such as machinery and equipment in a manufacturing plant, the functional interdependence test results in a very expansive unit of property'' and that ''it is inappropriate to use such a large unit of property for making a determination regarding improvements.''

The preamble to the 2011 temporary regulations (T.D. 9564) likewise states only that the plant property standard is a ''reasonable and administrable limitation on the functional interdependence standard, which otherwise could be overly broad in its application to industrial equipment.''

Neither preamble indicates why the government concluded that the unit of property determined using the functional interdependence standard would be inappropriate in the context of section 263(a) while presumably remaining appropriate in the context of the interest capitalization rules of section 263A. Arguably, absent an express statement from Congress to the contrary, the same unit of property should be used for all capitalization purposes, including both section 263(a) as well as section 263A.

[6]Reg. section 1.263(a)-3T(e)(3)(ii)(A).

[7]Reg. section 1.263(a)-3T(e)(3)(i). *See also* reg. section 1.263A-10(c).

[8]Reg. section 1.263(a)-3T(e)(6), Example 6.

[9]*Smith*, 300 F.3d 1023.

2. Machinery and equipment. The repair regulations' restriction of the plant property concept to machinery and equipment generally should present few issues. That largely reflects the notion that plant property is intended to apply to non-building property that the taxpayer is using in some sort of industrial process. In addition to the obvious types of machinery and equipment, however, many taxpayers need to consider whether specialized structures or systems dedicated to the production equipment likewise must be included in the scope of plant property.

For example, in analyzing how to identify the units of property in an electric power plant (clearly defined as plant property in the repair regulations), Rev. Proc. 2013-24, 2013-21 IRB 1142, includes ''station property'' as a separate unit of property. The revenue procedure defines station property as each structure that physically supports or encloses the generating unit equipment, along with the structure's associated systems and support facilities. Station property excludes accessory buildings (such as those used for administrative, training, or laboratory purposes), and the administrative space within a power station and the systems supporting that space (such as the heating and air conditioning, plumbing, and the electrical system in the administrative space). In other words, it applies only to the portion of the station property dedicated to the production equipment.

That treatment of station property generally is consistent with the government's earlier analysis of a power plant in the repair regulations. The regs conclude that the units of property in the power plant include a structure that is not a building for purposes of reg. section 1.48-1(e)(1). That provision defines buildings and structural components for purposes of the former investment tax credit rules (and for other purposes as well[10]). It states that the term ''building'' does not include a structure that is essentially an item of machinery or equipment, or a structure that houses equipment used in specific activities if the structure is so closely related to the use of the equipment that it clearly can be expected to be replaced when the machinery is replaced. The ITC regulations list as examples of non-building structures oil and gas storage tanks, grain storage bins, silos, fractionating towers, blast furnaces, coke ovens, and brick kilns.

The inclusion in Rev. Proc. 2013-24 of station property (and thus presumably treating it as plant property[11]) may be reasonable in light of industry practice. Taxpayers outside the electric utility industry should consider this category of structures as well, but obviously, must be careful not to assume that any structure that physically supports or encloses machinery or equipment performing an industrial process necessarily is part of the plant property. Instead, traditional manufacturing plants, warehouses, and distribution centers, for example, generally should be analyzed under the repair regulations' unit of property standards for buildings, rather than those for plant property, despite the fact that they may literally enclose industrial machinery or equipment.

In considering the scope of their plant property, taxpayers also must be mindful of positions taken for purposes of cost segregation studies and other depreciation positions. While the repair regulations are careful to draw a distinction between units of property used for depreciation purposes and those used for purposes of the repair regulations,[12] they also insist on some consistency between the repair regulations and the taxpayer's depreciation positions.[13] As such, when the taxpayer has depreciated items such as specialized HVAC, electrical, or plumbing systems, or specially reinforced foundations or concrete pads as dedicated to production machinery rather than being part of the operations and maintenance of the building itself, the IRS may seek to include those systems within the scope of the taxpayer's plant property.[14] The government's

[10]*See, e.g.*, reg. sections 1.168(i)-8T(b)(1) and 1.263(a)-3T(e)(2)(i).

[11]Rev. Proc. 2013-24 never uses the term ''plant property'' and does not cite the plant property standards used by the repair regulations as the basis for its conclusions. The revenue procedure was issued as part of the industry issue resolution program under which the electric utility industry played a role, but one cannot dismiss the revenue procedure's listing of units of property as a negotiated list divorced from the repair regulations' plant property standard. Because the regs conclude that generating assets are plant property, it would be reasonable to conclude that the government relied on the plant property standards in devising the units of property in Rev. Proc. 2013-24, even if they did not say so.

[12]Reg. section 1.263(a)-3T(e)(1) states that the unit of property rules in that paragraph apply only for purposes of section 263(a) and for stated sections of the regulations under sections 263(a) and 162. Similarly, section 5.03 of Rev. Proc. 2013-24 states that a taxpayer may not rely on the units of property identified in that document for any other purpose under the code or regulations, including determining the asset for depreciation purposes.

[13]Reg. section 1.263(a)-3T(e)(5).

[14]*See, e.g.*, *Piggly Wiggly Southern Inc. v. Commissioner*, 84 T.C. 739 (1985) (supermarket's HVAC units were not part of the building structure when installed solely to meet requirements of refrigeration equipment); *Scott Paper Co. v. Commissioner*, 74 T.C. 137 (1980) (components of electrical system carrying electrical load used in production processes not part of building ''operations and maintenance''); *Texas Instruments v. Commissioner*, T.C.

(Footnote continued on next page.)

conclusion in Rev. Proc. 2013-24 that specific plumbing subsystems, for example, constitute separate units of property in the power plant reinforces that possibility.

In short, the machinery and equipment potentially treated as plant property generally will be self-evident. Despite that, companies with specialized structures, HVAC, electrical, plumbing, or other systems dedicated to the production equipment should carefully consider whether these items must be treated as plant property, as well.

3. Industrial process. Functionally interdependent machinery or equipment is plant property only if it is performing an ''industrial process,'' a term not defined by the repair regulations. Instead, industrial process is described only by example to include processes such as manufacturing, generation, warehousing, distribution, and automated materials handling in service industries.[15] The repair regulations provide additional insight into the term through a series of examples that indicate that plant property includes an electric power plant[16] as well as the machinery used in a uniform and linen rental business.[17] On the other hand, a restaurant's tortilla-making machine is not performing an industrial process.[18] The plant property rules likewise are not applied to a railroad locomotive[19] or aircraft.[20]

There is considerable gray area, and little guidance on that gray area, between a power plant and a single tortilla machine. In the absence of a firmer definition of an industrial process, taxpayers are left to their own judgment. In most cases, the line should not be difficult to draw. For example, oil refineries, chemical plants, and ore processing facilities, while not listed in the regulations, are likely to be treated as industrial. Similarly, some types of assembly-line-like machinery in a warehouse or distribution facility are likely to be industrial (as warehousing or distribution equipment).

Less clear is what the regulations intend by the term ''automated materials handling in service industries.'' Presumably, it was intended to describe equipment akin to the laundry facilities used by the uniform and linen rental business described in the repair regulations, but the wording of the description could prove problematic. Arguably, a restaurant's single tortilla machine is automated materials handling equipment used in a service business, although the regulations reasonably conclude otherwise. The result is less clear, however, if rather than making the tortillas onsite at each restaurant, a restaurant chain makes identical tortillas in larger batches at a central kitchen. In short, even taxpayers in traditional service industries should review their machinery and equipment for assembly-line-like processes that may be construed as performing an industrial process. Taxpayers can hope that on examination the IRS will adhere to the presumably intended scope of the term ''industrial process'' until Treasury and the IRS can provide greater clarity.

C. Identifying Units of Property in Plant Property

1. Discrete and major functions. The ultimate goal of analyzing plant property is determining the appropriate units of property to use in applying the capitalization standards of the repair regulations, which occurs in the second (and much more difficult) step of the analysis. After identifying functionally interdependent machinery and equipment that is performing an industrial process, the taxpayer must further subdivide that initial item into ''smaller units comprised of each component (or group of components) that performs a discrete and major function.''[21] The meaning of discrete and major function is key to the analysis.

Again, the guidance provided by the repair regulations is limited to two examples, one addressing power plants and the other addressing a commercial uniform and linen rental service. In considering the machinery used by the uniform and linen rental service, the repair regulations describe a plant that uses many different machines and equipment in an assembly-line-like process to treat, launder, and prepare rental items for customers. Because the equipment is stipulated to be performing an industrial process, each of the two lines must be broken down into those assets or groups of assets performing a discrete and major function. On the facts posited, the regulations conclude that the taxpayer must treat as a separate unit of property for purposes of section 263(a) each sorter, boiler, washer, dryer, ironer, folder, and wastewater treatment system in each of the two lines.

The repair regulations take a similar approach in analyzing an electric power plant. A comparison of the regulations' example with the approach more recently taken by the IRS and Treasury in Rev. Proc.

Memo. 1992-306 (specialized flooring essentially functioned as an item of machinery or equipment); Rev. Rul. 79-183, 1979-1 C.B. 44 (portion of stamping press foundation specially designed to meet the support requirements of the stamping presses eligible for the ITC rather than treated as part of building).

[15]Reg. section 1.263(a)-3T(e)(3)(ii)(A).

[16]Reg. section 1.263(a)-3T(e)(6), Example 5.

[17]*Id.*, Example 6.

[18]*Id.*, Example 7.

[19]*Id.*, Example 8.

[20]*Id.*, Example 14.

[21]Reg. section 1.263(a)-3T(e)(3)(ii)(B).

2013-24 provides insight into how the government might interpret discrete and major function in the future. The example in the regulations states that the power plant includes a structure that is not a building under reg. section 1.48-1(e)(1), four pulverizers that grind coal, one boiler that produces steam, one turbine that converts the steam into mechanical energy (along with a set of rotor blades for the turbine), and one generator that converts mechanical energy into electrical energy. As with the laundry business, the regulations first conclude that the initial unit of property is the entire power plant, based on the functional interdependence test.

Because the power plant is performing an industrial process, the initial unit of property must be further divided into smaller units of property, based on the components (or groups of components) performing discrete and major functions in the plant. The regulations conclude that the units of property for purposes of section 263(a) are the structure, the boiler, the turbine, and the generator. Each of the four coal pulverizers is treated as a separate unit of property (rather than the combination of all four pulverizers). The turbine blades, on the other hand, are not treated as a separate unit of property, because they do not perform a discrete and major function.

That example seems to suggest that only the relatively major operational units in the power plant (and presumably other industrial facilities) must be considered units of property. Rev. Proc. 2013-24, however, suggests the government may interpret the phrase ''discrete and major functions'' more broadly. It analyzes various types of electric power plants to determine the required units of property for purposes of the repair regulations. On what presumably are the same facts underlying the example in the regulations, the number of units of property expands from the five categories of property units (structure, boiler, turbine, generator, coal pulverizer) to as many as 26 units for coal-fired plants, 24 units for natural gas- and oil-fired plants, 14 units for hydroelectric power stations, and as many as 33 units of property for nuclear power plants.

Expanding from the structure, crushers, boiler, turbine, and generators in a power plant (the basic functions used to generate electricity), the revenue procedure also includes as separate units of property the auxiliary boilers; various scrubbers and air cleaning systems; multiple individual water treatment, cooling, and distribution systems; the auxiliary power system; and others. That granularity is further highlighted by the government's listing of the ''major components'' within the listed units of property.[22] The revenue procedure identifies nearly 70 major components for a coal-fired plant, and nearly 100 for a nuclear plant, the replacement costs of which generally must be capitalized.[23]

Rev. Proc. 2013-24 was developed under the auspices of the IRS's industry issue resolution program. The IRS and Treasury worked with members of the electric utility industry to understand the relevant facts in developing the guidance, and so cannot be accused of having worked in a vacuum to develop this extensive list of discrete and major functions. Further, each of the identified components and systems in a power plant serves an important function. Despite that, the granularity with which Rev. Rul. 2013-24 implicitly[24] defines the term ''discrete and major functions'' may signal a similar approach when the IRS begins examining how companies apply the plant property standard outside the electric generation context. Unless clarified by final regulations, the meaning of the words ''discrete and major'' could become the focus of many conversations between taxpayers and the IRS.

D. The Bottom Line

Properly identifying the company's units of property is a critical first step in applying the repair regulations. While many companies are already familiar with the basic functional interdependence standard used for many years in the context of interest capitalization under section 263A(f), companies engaged in industrial processes now must become familiar with the plant property concept as well. Doing so is an important element of properly implementing the repairs regulations.

In general, companies that potentially have plant property need to follow a three-step analysis.

First, they must identify any functionally interdependent non-building property. That generally should include only machinery and equipment,

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[22]Identifying the major components within a unit of property is necessary for applying the repair regulations' capitalization standards. Although that step is not the focus of this discussion, it is worth noting that Rev. Proc. 2013-24 makes clear that not all units of property necessarily must contain a major component. In other words, not all components are *major* components for purposes of the repair regulations. The same ambiguity discussed herein regarding ''major'' functions likewise is present in determining which components are ''major'' components for purposes of the regulations.

[23]Reg. section 1.263(a)-3T(i)(1)(vi).

[24]The revenue procedure does not explicitly state that it is applying the plant property standard of the repair regulations, and so likewise does not state that the identified units of property are performing discrete and major functions. But because the repair regulations treat a power plant as plant property, it would be reasonable to assume that this standard was used by the IRS and Treasury in developing the guidance.

keeping in mind that the company might have treated some ancillary items as part of the overall production process. If so, the IRS might seek to include those items as well. Most companies engaged in traditional manufacturing or industrial processes will be familiar with the functional interdependence concept from having applied the interest capitalization rules of section 263A(f). For those companies, reviewing the units of property used for that purpose will be a useful guide. Because the standards are identical, there is no reason why the functionally interdependent units of property identified for interest capitalization purposes would not be the same as those used for purposes of the repair regulations. Companies unfamiliar with that concept should begin by considering whether various elements of their production facilities could have been constructed and operated as independent facilities, even if doing so would have been economically or operationally impractical.

Second, the company must determine whether the functionally interdependent property is performing an industrial process. As discussed above, the regulations are vague regarding what is included in that term. In most cases, the determination will be fairly obvious, but in others, the company will need to review the examples in the regulations demonstrating processes that are industrial (power generation, commercial laundries) and those that are not (aircraft, locomotives, tortilla machines) and reach a determination on the company's facts.

Finally, the company must divide the functionally interdependent equipment into smaller units based on discrete and major functions. Once again, the repair regs provide limited guidance on that critical term beyond the two examples discussed above. As demonstrated in Rev. Proc. 2013-24, however, taxpayers and the IRS are likely to have many discussions in the coming years over which functions are discrete and major. Companies in the IRS's compliance assurance process program can have prefiling discussions with their exam teams regarding those terms and how to apply them to the company's industrial machinery and equipment. Other taxpayers will need to exercise their best judgment in making that determination. Useful information could include publicly available videos, marketing materials, or tour information used by the company in describing its products or manufacturing processes to the public, as well as internal training materials. Interviews and site visits with company operations personnel are particularly instructive, particularly for tax team members who may have never actually viewed the production process, yet are now charged with dividing the production lines into discrete and major functions.

After completing those three analytical steps, the company will have identified its units of plant property for purposes of the repair regulations. Importantly, that analysis does only that: identify the relevant units of plant property. Once the analysis is completed, the same capitalization standards that apply to all other tangible property will determine whether particular costs are deductible repair costs or instead are capital improvements.